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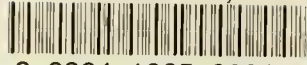
# GALLATIN CANYON

SUMMARY REPORT

THE MURRAY-McCORMICK ENVIRONMENTAL GROUP



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THE GALLATIN CANYON PLANNING STUDY  
SUMMARY REPORT

The Murray-McCormick Environmental Group  
Applied Science and Resource Planning Division  
1900 K Street, Suite 103  
Sacramento, Calif.  
95814





Submitted to:

Department of Planning and  
Economic Development  
State of Montana  
Helena, Montana

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This report, EP&D, 0770-0010  
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mental Planning & Design  
Division.

Ernest L. Seeman  
Director of Applied  
Science





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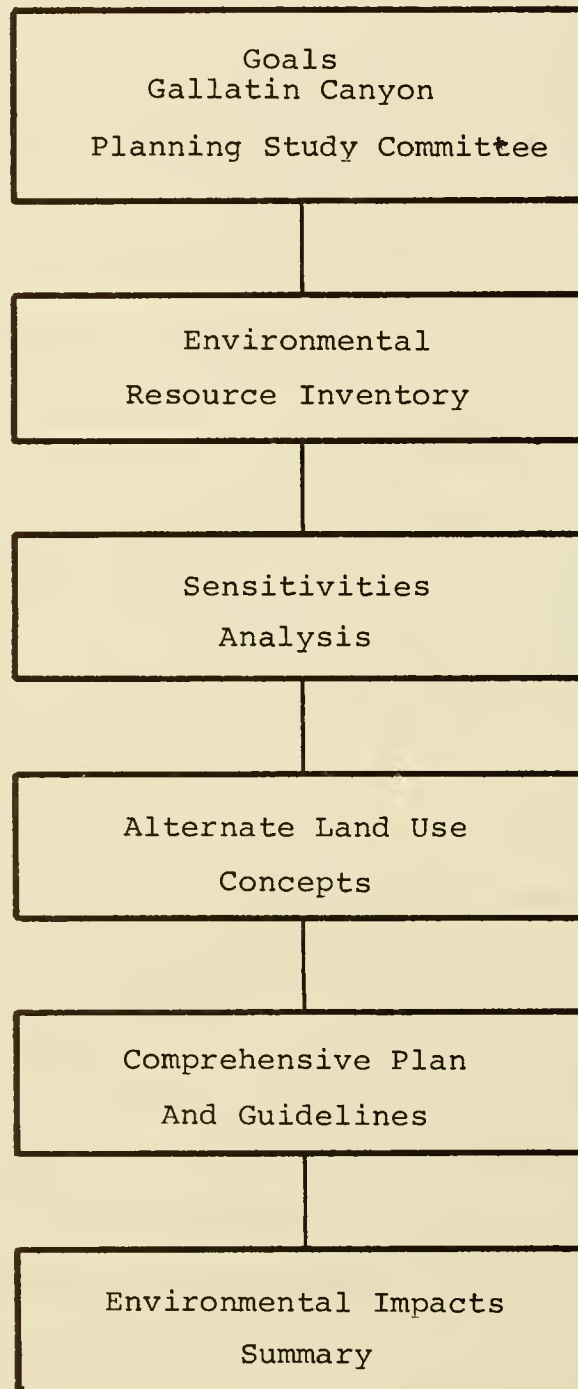




The Gallatin Canyon is in many respects a unique place, with a tremendous variety of natural environments inhabited by a wide range of plants and animals. It lies in some of the most rugged and most beautiful terrain in the United States. The Canyon, an area of approximately 950 square miles, extends north and south thirty-five miles between the Gallatin and Madison Mountain Ranges. The Madison and Gallatin Ranges are outstanding examples of uplifted anticlinal folds common to the Rocky Mountain region. The ranges have been formed primarily through extensive compression and related crustal activity, and the subsequent erosive action of water and ice. Running along the Canyon floor is the famous Gallatin River, beginning in nearby Yellowstone National Park. Highway 191 follows the river along the Canyon floor and provides limited access to the entire study area. The Canyon exhibits all the general aesthetic characteristics of the environment of Yellowstone National Park.



# GALLATIN CANYON PLANNING STUDY APPROACH



## INTRODUCTION

This report presents a summary of the full technical detail of the Gallatin Canyon Planning Study, conducted for the State of Montana, Department of Planning and Economic Development. Comprehensive Planning is becoming increasingly complex, with more and more factors necessarily affecting land use decisions. The State has recognized this increasing complexity by directing The Murray-McCormick Environmental Group to study a wide range of planning alternatives, and to directly involve the public in the formation of planning decisions.

This Comprehensive Plan for Gallatin Canyon is directed to guiding overall development activities in the Canyon--particularly as those activities relate to the scenic natural environment. We hope that the findings and conclusions of this study will point up desirable improvements in the basic land use and management plans that the people may wish to consider.

Members of the public, through the Gallatin Canyon Planning Study Committee, have been particularly effective in developing goals and in pointing out critical issues during the planning process. The Murray-McCormick Environmental Group is pleased to have served as a professional link between the Study Committee and the State Planning Office.

This Summary Report presents the major results of the study, and complete technical information is available in the Final Report.



## STUDY INVOLVEMENT

### FOCUS

There have been several attempts to initiate some form of planning program for Gallatin Canyon. Continuing development within the Canyon has been an issue of wide interest for many years, most recently focusing on the Big Sky of Montana, Inc. recreation development. Of great concern has been the possible impacts such continuing development might have on the natural environment. Before and after Big Sky's announcement of locating in Gallatin Canyon, there were efforts made to begin some form of planning and zoning, but all failed.

The impetus for this Gallatin Canyon Planning Study came from a series of informal meetings of landowners. They formed a group and passed a petition in the Canyon requesting the State Planning Department to help start a planning program. In February of 1971, this study was started with appropriate funding and with a citizens group, the Gallatin Canyon Planning Study Committee, appointed by Governor Forest Anderson.

### CITIZEN GOALS AND OBJECTIVES

In the course of the planning program the Gallatin Canyon Planning Study Committee was asked to document community attitudes and values, resulting in a list of recommended goals and objectives. These were necessary in the program to describe the kind of Canyon the people wanted, and the kind it should be in the future. The general long range goals and objectives of the Canyon are to conserve and develop its great natural resources and promote the public health, safety, peace, comfort, convenience, and general welfare for the present and future citizens and visitors to the Canyon.



Following is a list of general goals developed to establish the intent and direction of planning activities within Gallatin Canyon. In planning these goals and objectives, Gallatin Canyon was considered as:

A unique area possessing great water and timber resources, providing the state and nation opportunities for resource and recreation development;

A great outdoor recreation and open space area with unexcelled scenic beauty, abundant fish and game, excellent climate, providing diversified opportunities for not only local residents, but for the state and nation as well;

A desirable place to live and work in and to visit, with a healthful, smog-free atmosphere, without the problems of overcrowding, and with excellent opportunities for constructive use of leisure time.

#### General Goals

Prepare suitable land use alternatives for the environmental enhancement of the entire region to be strengthened by recommended guidelines that provide control of the physical environment.

Develop and maintain cooperation and coordination of government agencies--local, state, and federal--responsible for the creation and preservation of the present quality of life in the Gallatin Canyon area.

Coordinate planning efforts including goals, plans, and programs of local, state and federal agencies relating to open space, recreation facilities, and scenic preservation for residents and tourists that visit the Canyon area annually.

Enhance the social, cultural, and recreational activities in the Canyon while preserving the ecological and environmental values of the region.

Protect and preserve the existing ecosystem from unnecessary alteration and disturbance.

#### Environmental Goals

Encourage preservation of the natural environment and scenic values of the Canyon.





Encourage coordination of both public and private forest management practices and recommend logging guidelines designed to protect and enhance the existing environmental quality of the Canyon.

Preserve stream and river channels and riparian vegetation from unnecessary alteration and disturbance.

Establish water quality standards for major streams and maintain them through constant monitoring.

Establish air pollution control measures and monitor air pollution henceforth.

Develop and apply adequate erosion control guidelines to all new construction.

Preserve and enhance the fish and wildlife habitat.

Study and develop a program for solid waste and garbage collection and disposal for business, residential, and recreational uses.

Provide for sewage disposal and treatment standards designed to protect and water quality of streams and rivers in the Canyon.

Encourage development of fire protection services for the entire Canyon area and investigate the formation of a Gallatin Canyon Fire Protection Agency. Coordinate volunteer fire fighting units where structure concentrations warrant.

### Community Design

Keep all future development in character with the special natural environment of Gallatin Canyon.

Encourage site planning and building and landscape design to result in an attractive appearance from the highway, and a harmonious relationship among the various elements of the development and with the landscape.

Establish development guidelines and visual standards for new construction, including guides for signing, highway and development treatments, exterior motifs, utility distribution lines, and screening vegetation.

Take care not to obstruct important vistas and views within the Canyon. A variety of standards should be developed in order to achieve this purpose under different conditions.





Develop land use alternatives designed to enhance the compatibility of existing and new land uses in the Canyon.

Develop standards on signing and display advertising to establish certain size, color, and design limitations to blend with the natural environment.

Provide adequate facilities for community services to residents and visitors in the Canyon.

Visually screen mobile homes and recreational vehicles from major circulation routes.

#### Land Use Activities

Provide for additional residential and tourist/recreation developments in the Canyon and develop guidelines to enhance the relationships between such development and the natural environment.

Limit further commercial development to concentrated facilities necessary to the support of recreation oriented activities and to selected sites where such development would be compatible with other land uses.

Insure commercial areas are easily accessible from primary circulation routes and prohibit noxious business and industrial uses from the Canyon.

Control the development of recreational land uses in the Canyon and limit to activities which depend upon, and are compatible with, retention of the area's natural character.

Encourage no further industrial activities to locate within the Canyon.

#### Circulation

Develop the Gallatin Highway 191 as a scenic highway, with recommended guidelines for development activities along the highway and adjacent off-highway use.

Develop an adequate transportation and circulation system that has a minimal impact on the present environment.

Adopt and put into practice design standards, speed controls, sound controls, and enforcement intended to improve the safety, usability, and visual enjoyment of Highway 191.

Encourage the elimination of nonessential trucking activities from Highway 191.



Direct highway access to abutting properties should be limited in number.

Restrict construction work on Highway 191 to normal maintenance and minor improvements including scenic turn outs, safety islands, protected turning movements, pedestrian crossings, signed animal crossings, and traffic control signing, where needed.

These basic goals and objectives are of foremost importance and formed the basis for determining the direction of this study. They were adopted by the Gallatin Canyon Planning Study Committee on August 12, 1971, to guide the planning program.

#### STUDY APPROACH

The Gallatin Canyon landscape is the product of man's cultural interaction with the natural resource. Every land use development should consider the question of demand and the resolution of demand relative to supply. At the same time, consideration should be given to the entire question of manipulation of opportunities offered and constraints imposed by the natural environment relative to undesirable ecological consequences.

The study approach involved an environmental analysis process divided into three efforts: an analysis of the natural and cultural environments; an objective review of identified natural and cultural constraints; and preparation of alternative development concepts based on the desired goals and environmental sensitivities.

The collected resource inventory data was analyzed in terms of sensitivities and implications to development. The sensitivity analysis has been used to develop a basic understanding of existing conditions and future potentials in the natural environment, with primary emphasis to existing and potential areas for recreation-



community related development. The sensitivities analysis was then used to prepare alternate development concepts to establish a framework necessary to preparing the comprehensive plan.





## ANALYSIS STEPS LEADING TO THE COMPREHENSIVE PLAN

### ENVIRONMENTAL RESOURCE SURVEY

Of initial importance to the study analysis is the detailed environmental resource reconnaissance of the Canyon. For the purposes of this Summary Report, only the salient aspects of the natural and cultural environments are presented here in terms of their sensitivities and implications to development. For a more complete and detailed report, see the Final Report of this study.

Geology. The following map of geologic hazards delineates zones or areas that, due to either past activity (landslides, etc.) and/or certain local physical characteristics (expansive clays, etc.) pose serious potential hazards to development. It should not be interpreted as excluding development from any of these areas. However, specific and detailed investigations should be conducted to determine the suitability of each area for any proposed development.

Several considerations have been made in an attempt to delineate these potential hazard zones:

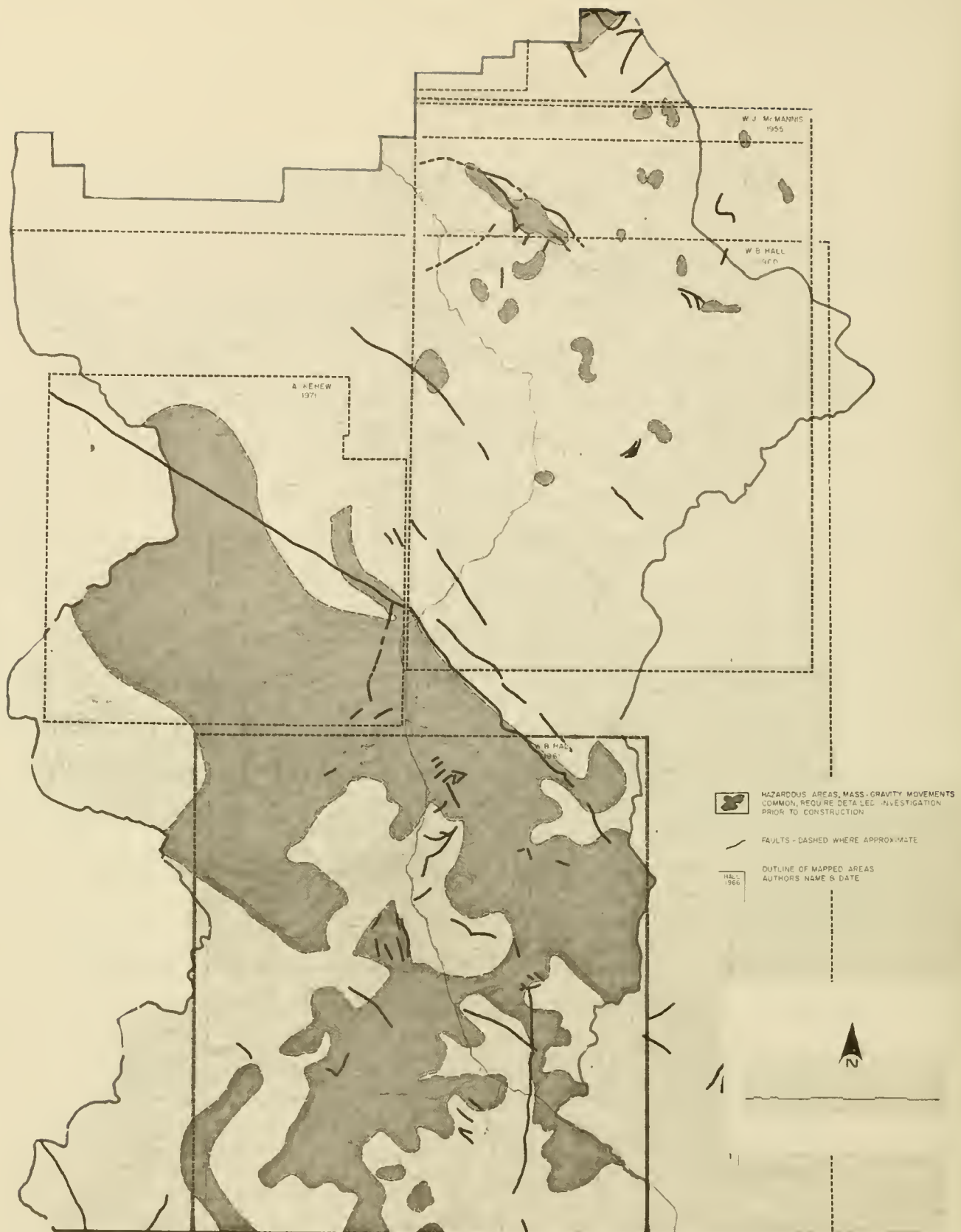
Stratigraphically many of the units in this area are extremely undesirable for construction development. This may be due to: interbedded shale and sandstone that have proven unstable in the past; presence of weak and/or expansive clays; or the potential effects of tectonic movement (earthquakes).

Areas of historical instability: areas of landslides, slumps, and other mass-gravity type movements.

Location of faults and the potential for movement along these zones.

Factors of slope, vegetative cover, and soils.





# **GEOLOGIC HAZARD ZONES** **GALLATIN CANYON PLANNING STUDY**

Figure I-3



Geologically, certain rock types must be considered more fragile or potentially hazardous than others. The Cretaceous age black shales (thermopolis formation) are most susceptible to mass-gravity movement. In this formation, particular caution must be taken in construction. Wherever possible, development is not recommended on the thermopolis formation. Also, outwash gravels and glacial till overlying these shales pose potential development hazards.

The potential for landslides or other mass-gravity movement is present throughout the entire area. Roadways, building foundations, and other construction should be designed to recognize this potential. In areas of old landslides, care should be taken not to introduce water into the slide mass. This could easily set the slide area in motion again.

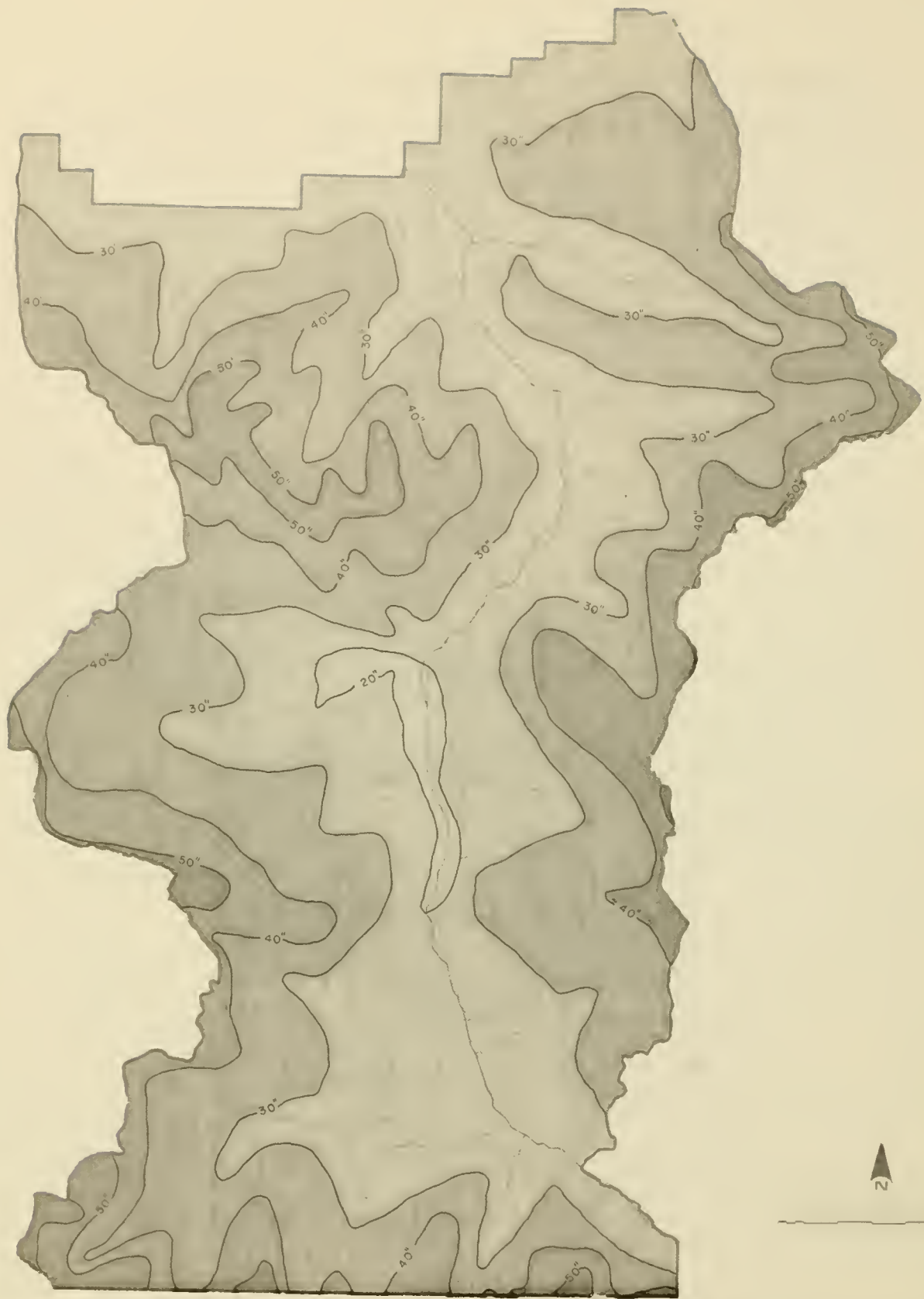
In the alpine and subalpine areas construction on unstable rock glaciers should be prohibited. These are found in the West Fork basin, on the flanks of Lone Mountain and the contiguous drainages.

As the Gallatin Canyon area is active seismically (ref: Hebgen Lake earthquake area), planning and development design should incorporate maximum earthquake safeguards.

Climate. While there are no significant climatic factors that would severely limit development, several conditions do exist that must be taken into account when planning for future development uses.

In the valleys at elevations under 6,000 feet, the highest monthly precipitation amounts occur during late spring and early





**AVERAGE ANNUAL PRECIPITATION**  
**GALLATIN CANYON PLANNING STUDY**

Figure I-4



summer. This heavy precipitation is often associated with thunderstorms. At higher elevations, the greatest precipitation amounts occur in the winter, usually in the form of snow. Snowfall is moderate in low elevations, but becomes quite heavy above 7-8,000 feet. Some areas may experience occasionally strong winds. Care should be taken in locating ski lifts, trams, and outdoor recreation activities. Blizzard conditions may occur requiring adequate snow removal equipment.

Temperatures in the summer feature warm days and cool nights, with freezing temperatures possible at higher elevations. Winters can be quite cold with temperatures in areas subject to cold air ponding falling to below -40°F on occasion. Outdoor activity and living facilities should avoid these areas. Residues from burning fuels (fireplaces, cars, etc.) collect near the ground on calm nights.

Thunderstorms are relatively common in late spring and summer. They may produce locally strong winds, hail, and high precipitation amounts in short periods. During these storms, lightning caused fires will occur in forested areas. Buildings should have adequate lightning protection.

Generally, development should utilize south facing slopes as living areas and for more sedentary outdoor activities. The north facing slopes might be utilized for ski facilities.

Hydrology - Water Quality. The hydrology of the region is an aspect of the environment that is likely subject to adverse changes when development takes place. Extreme caution must be





## WATER RESOURCES

# GALLATIN CANYON PLANNING STUDY

Figure I-5



taken to avoid pollution of the surface streams and aquifers of the region.

More extensive records regarding the stream levels during the spring thaw are needed to adequately evaluate the safety of locating near the various streams.

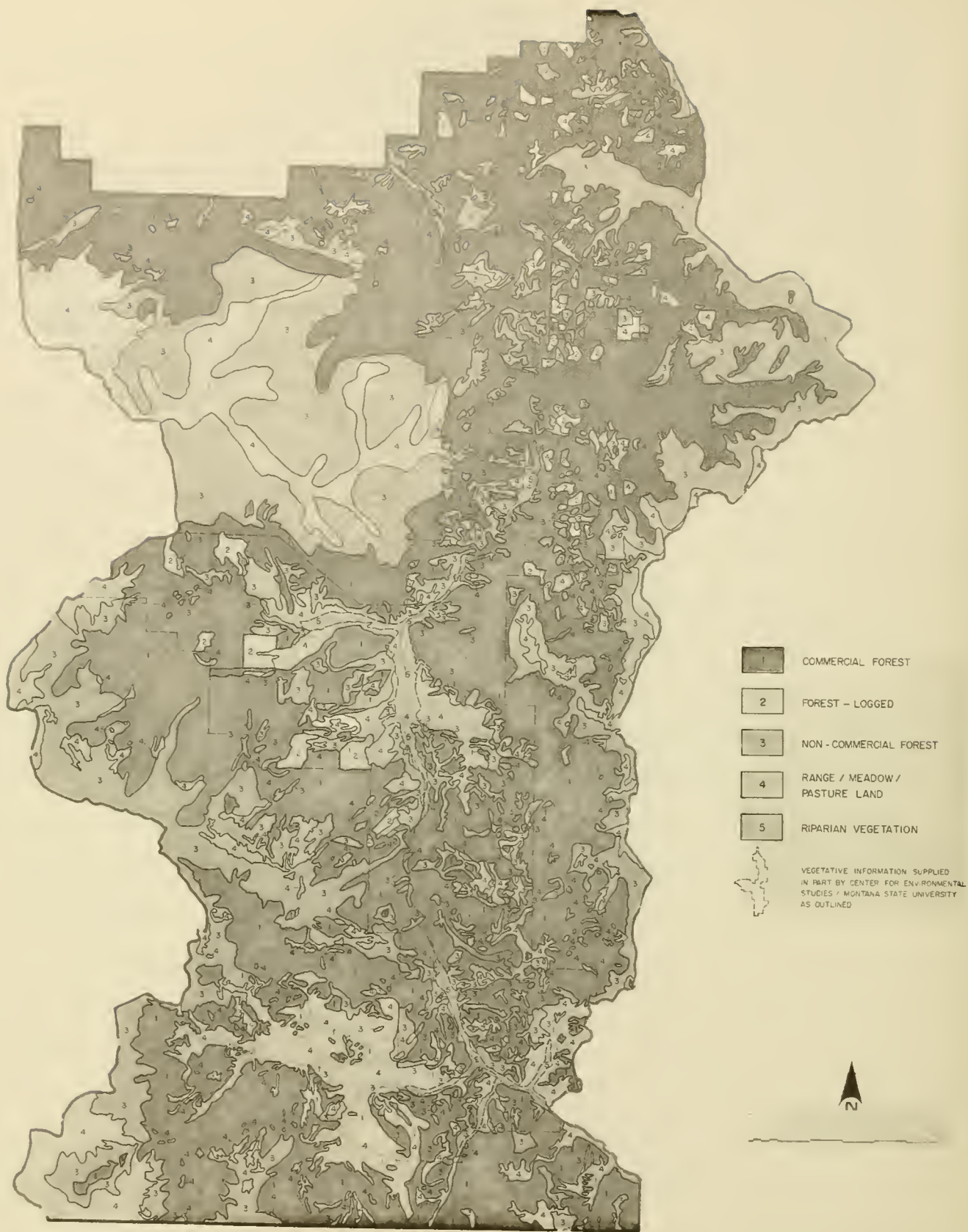
Continuing utilization of ground water and surface water sources will be necessary to supply future developments in the Canyon. Water quality baseline parameters should be established for the entire study area, similar to the initial work conducted on the West Gallatin Canyon area by the Montana State University study team in 1960. A program such as this would establish existing criteria for water quality and would enable effective monitoring programs to be initiated.

Vegetation. The complete vegetation pattern in the Gallatin Canyon should be analyzed within the full spectrum of the multiple use concept of management as developed by the Forest Service. The General Forest Zone appears to offer the best potential for development, primarily because it is generally characterized by timber cover with intermittent park and meadow areas. The Crest Zone does not offer the present potential in terms of immediate accessibility, but may well provide future trail and ski run locations. The Water-Influence Zone generally appears to offer the most easily developed sites, but only if extreme care is exercised in planning development.

Although the timber resources in Gallatin Canyon are important to the general economy of the region, the principles of multiple use management must remain dominant to any single use if the







# **VEGETATIVE PATTERNS** **GALLATIN CANYON PLANNING STUDY**

Figure I-8

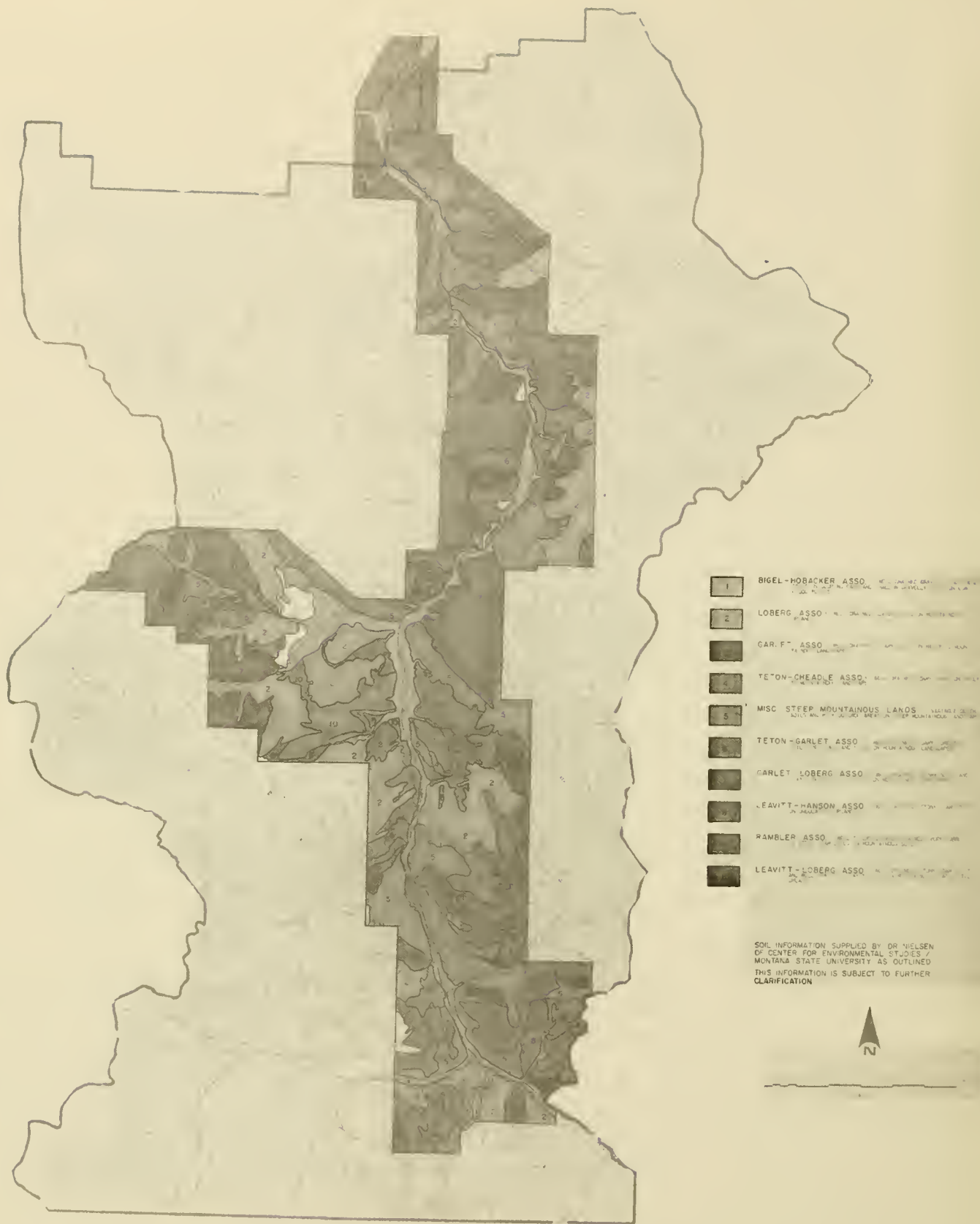
integrity and the unique character of the Canyon are to be maintained. Only this form of management will continue to afford activity in outdoor recreation, range utilization, timber production, and watershed and wildlife management.

Extreme care must be exercised in developing the various uses under the multiple use management concept. This will require a separate analysis for each individual management unit for its most advantageous use or uses, and must consider the long term impacts on land use options. Sensitive cutting prescriptions are necessary to control harvesting techniques and cleanup procedures where other uses prevail and aesthetics are important.

Extreme care should be exercised in development within the study area to insure adequate fire protection. The generally remote locations in Gallatin Canyon are by their very nature extremely hazardous with respect to wildfire. The seasonal thunderstorms and accompanying lightning strikes offer extremely hazardous conditions. Fire occurrences are most frequent during these periods. If care is taken in selecting development sites, and providing for adequate fire protection, risks to improvements from wildfires could be reduced.

Soils. A study of estimated soil limitations and/or suitability for selected land uses has been developed for the Canyon area by Dr. Gerald Nielsen of the MSU Study Team. Dr. Nielsen and members of his team delineated fifteen different utilizations of the soils in the Canyon. Different types of human usage such as picnic areas, campsites, septic tank filter fields, roads, trails, and building





# SOIL ASSOCIATIONS GALLATIN CANYON PLANNING STUDY

Figure I-9



sites were identified. The soil types were then rated as having slight, moderate, or severe limitations for the different uses.

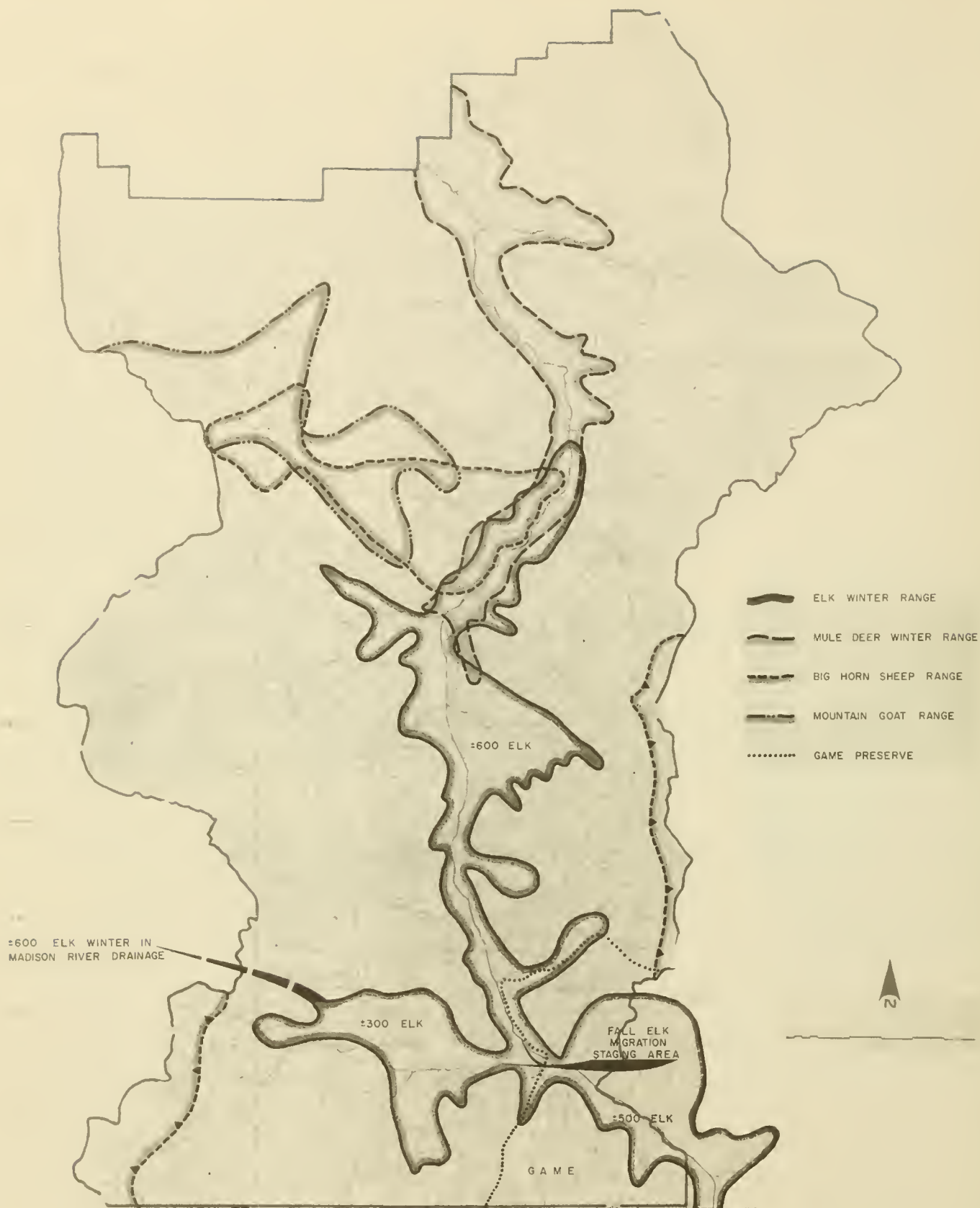
Review of this information indicates that five of the soil associations offer less severe restrictions or limitations than do the others. These are Bigel-Hobacker, Loberg, Teton-Cheadle, Leavitt, and Leavitt-Loberg associations. This analysis provides a guide to land use development and offers a basis for predicting possible consequences of unwise land utilization. Ultimately the homeowners, property owners, contractors, and taxpayers will have to bear the cost of ignoring the natural soil limitations. Many limitations, however, can be overcome by investing in additional planning study.

Fish and Wildlife. Wildlife is a primary attraction of Gallatin Canyon. Fishing and big game hunting account for the present major recreation uses of the area. Most notable are the famous Gallatin elk herds and the trout of the blue ribbon Gallatin River.

Increasing winter and summer recreation uses in the Canyon and nearby areas are presenting wildlife management problems. Pressure for other uses of land that has historically been the range of these animals will cause them to either decline in number or move into areas of less intensive habitation. Hunting and fishing activities in Gallatin Canyon will come under even greater pressure as other uses of the area increase.

Gallatin Canyon wildlife are managed jointly by the Montana Department of Fish and Game and the Gallatin National Forest. The





## WILDLIFE RANGES

# GALLATIN CANYON PLANNING STUDY

Figure I-10





checkerboard pattern of jurisdictional coverage in the Canyon has made it almost impossible to manage habitats and herds. Most notable has been the problem of winter forage for the herds, and the other, recommending the herd forage itself.

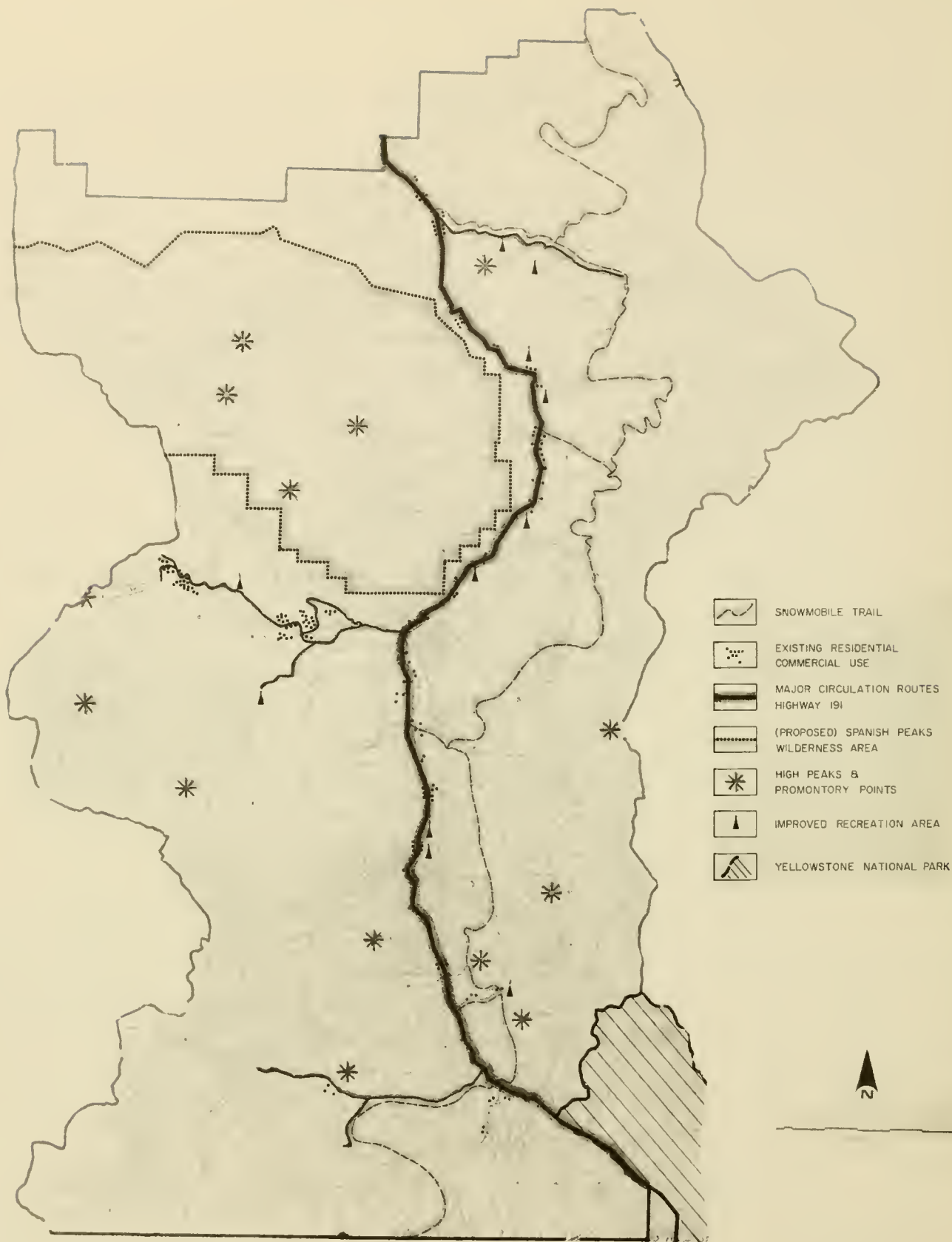
The question of winter feeding and herd size are management decisions and should be based on needs of the herd. Careful consideration should be given to coordinating wildlife management practices throughout the Canyon to insure the continuance of these vital occupants.

Settlement. Dominant growth in the Canyon is concentrated around the Big Sky development in the West Fork area (west fork of the Gallatin River). Gallatin Canyon, formerly occupied by small dude and livestock ranches, has in recent years been invaded by summer homes and cabins. There are also an increasing number of permanent homes in the area occupied primarily by retired persons. Resident population (including summer and part-time residents) of the Canyon is about 300 families.

The natural resources attributed to the Gallatin Canyon area include mountainous terrain, blue-ribbon streams and rivers, mature forests, and a refreshing climate. These resources have attracted tourists and created unique recreation opportunities. People from nearby urban centers and distant cities come to Gallatin Canyon to share in the region's natural environment.

The future character, economy, and general attraction to the visiting tourist depends upon the Canyon's ability to preserve its unique qualities not available elsewhere.





# **EXISTING LAND USES** **GALLATIN CANYON PLANNING STUDY**

Figure I-11

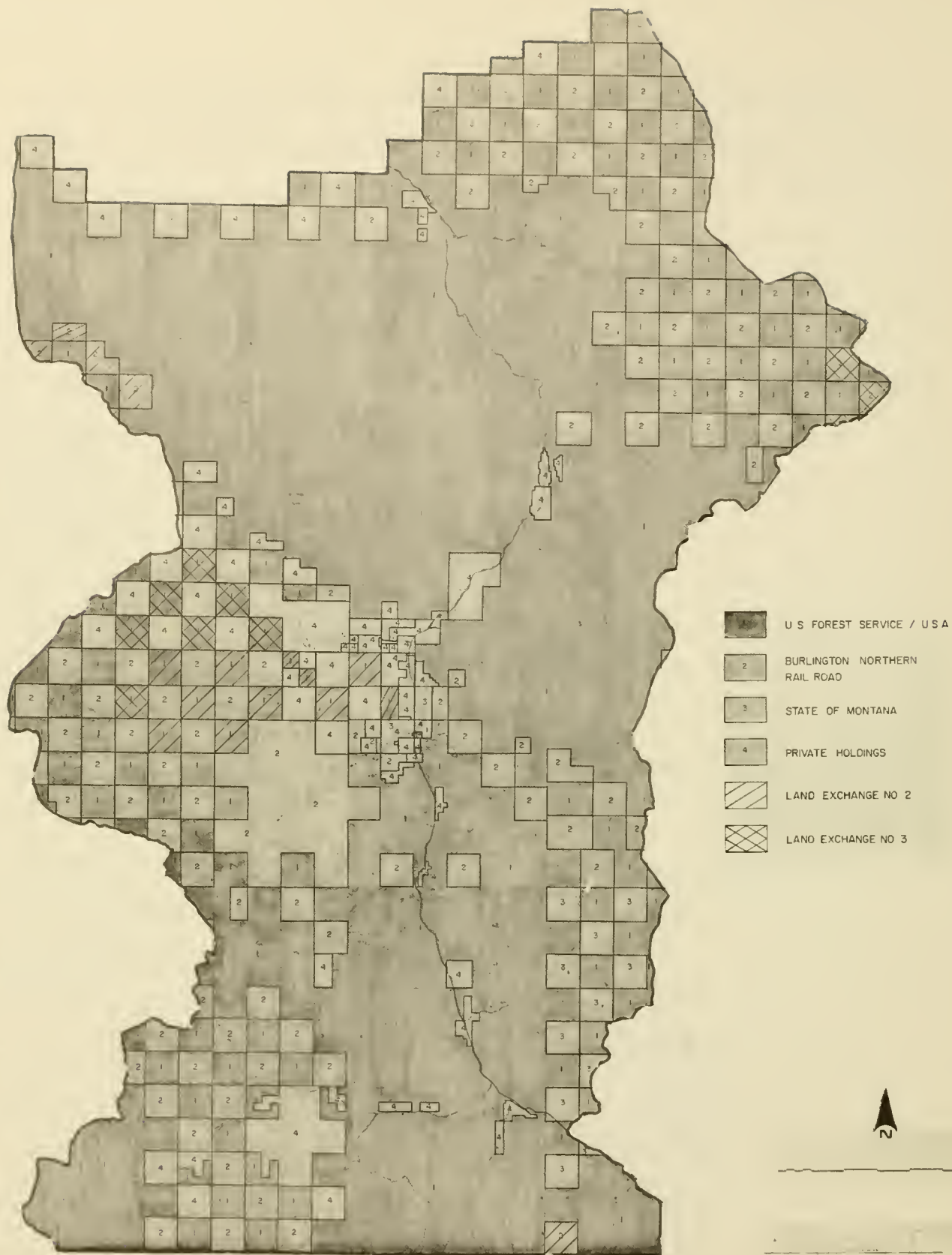
Circulation. Montana State Highway 191 provides the only linking transportation route in the Canyon. It serves as a major transportation route connecting Bozeman and western Montana with cities to the south. A problem of concern on this highway has been the increasingly heavy truck traffic. Little of this truck traffic serves the Canyon directly, and in fact its very presence through the Canyon raises considerable concern.

The Gallatin Canyon Planning Committee defines as a future goal the development of Gallatin Highway 191 as a scenic highway. It is recognized that future improvements to the highway should be made only as they relate to recreational use activities.

Study indicates the demands will continue on Highway 191 to serve as a major recreation access corridor in the area. The treatment of land use activities contiguous to this corridor will greatly affect the environmental quality of the Canyon as it continues to develop.

Land Ownership. Most of the land within the Canyon is held in ownership by two parties--the United States government and Burlington Northern Railroad. Together they control approximately 80-85 percent of the land within the study area. The U. S. Government land is part of the Gallatin National Forest and is under the jurisdiction of the U. S. Forest Service. The remaining acreage is divided among a relatively small number of landowners. The accompanying land ownership map delineated the exact locations of the major property holdings, while grouping the more minor (in size) ownerships.





# **LAND OWNERSHIP** **GALLATIN CANYON PLANNING STUDY**

Figure I-12



Overall Development and Growth Patterns. Gallatin Canyon is on the threshold of change from an isolated ranching and wilderness country, to an active recreational development serving the entire western United States. Land is being sold and subdivided at an increasing rate in the Gallatin area with some major building beginning. The expected development can either alter the landscape, well-known and valued, or it can utilize the advantages of the natural environment and resourcefulness of the residents and land owners. It is the premise of this report that Gallatin Canyon deserves the best of treatment. Its aesthetic values are such that development should be based upon a respect for and understanding of the landscape character.

#### ENVIRONMENTAL SENSITIVITIES ANALYSIS

The resource inventory data that have been collected and summarized in this report have been analyzed in terms of sensitivities and implications to development. The sensitivity analysis has been used to develop a basic understanding of existing conditions and future potentials in the natural environment, with primary emphasis on existing and potential areas for recreation-community related development. The sensitivities analysis was then used to prepare alternate development concepts to establish a framework necessary for preparing the comprehensive plan.

The environmental analysis process is divided into two subgroups, the natural constraints analysis and the cultural constraints analysis. The results of analyzing these two subgroups is presented in the land development sensitivities



discussion. The basic premise employed in the analysis process is that each place in the landscape has an intrinsic suitability for certain land uses.

Natural Constraints. Characteristics of the natural elements of the environment--vegetation, geology, soils, topographic slope, wildlife--and their interrelationships have been analyzed in terms of the number of constraints they might present to development. These elements have been added in combination and superimposed, grouping areas with similar environmental sensitivities and related land use constraints. In order to collate the findings of the Environmental Resource Survey and to interpret them, all the land in the study area was valued with respect to each of the factors investigated. Judgements were applied to the categories within each element to distinguish between more important and less important factors.

The area covered by available soils information presents a serious limitation on the delineated categories of the natural constraints map. Other elements of the natural environment must also be considered such as hydrography and climatic considerations. These elements will affect any particular place in the Canyon, but have not been identified here as presenting significant major constraints to possible development.

Any development in the Canyon should be understood to be contingent upon the development of a satisfactory source of ground water on the site for domestic uses. The disposal of liquid wastes will necessarily have to be investigated individually for each of



the site areas too. The established migration routes used by elk and mule deer should be carefully avoided in development plans. Few of the identified natural constraints present an insurmountable problem to development, they only indicate areas requiring more specific consideration to the local environment.

Cultural Constraints. The natural constraints are the most important determinants in locating physical development on the study area, but not the only determinants. Characteristics of the cultural elements of the environment--land ownership patterns, existing land uses, and circulation patterns--have been analyzed in terms of the constraints they might present to development.

While existing land uses and circulation access present important constraints, the land ownership patterns are the real restricting element. Only approximately 30% of the study area is presently under private ownership. That land delineated as being under private ownership was judged as presenting less of a constraint to future development than the public holdings, less of a constraint in this case meaning a wider possible range of potential land uses. The public lands, largely under the control and jurisdiction of the U. S. Forest Service, are expected to be developed under a multiple-use management concept.

The land exchanges currently under consideration (nos. 2 and 3)\* will add a considerable amount of acreage to the private ownership in the West Fork drainage--if they are approved. And these complete exchanges will result in one owner--Burlington Northern, Inc.-

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\* Final Environmental Statement (1971)



controlling most of the land in this drainage. This consolidation of ownership in the West Fork would result in less of a constraint to the future development potential of the drainage.

The Spanish Peaks primitive area, currently under consideration for designation as a wilderness area, is identified as a constraint in that no development or improvement will occur within this area. Another built-in constraint is applied to the total Canyon study area in the demands of limitation imposed by the citizens' committee on any improvements to Highway 191. One of the goals of the citizens' group is to keep Highway 191 as a two lane road. This definitely limits the amount of traffic this road will be able to satisfactorily carry.

Resource Analysis Conclusion. The Land Sensitivities Map (Figure I-15) outlines both the natural and cultural constraints Maps, presenting those areas that would be most sensitive to additional or new land use development. The degree of sensitivity is based on the number of identified constraining environmental elements, i.e., slope, soils, vegetation, ownership, etc. Areas are delineated from those having the least number of sensitivities (none) to those having the most number of sensitivities (three or more). They are also identified in terms of ownership patterns. It is apparent that most of the readily accessible lands present at least two constraints to further development. They may be in any combination of the identified environmental elements. While not necessarily presenting insurmountable problems, these constraints will demand individual attention in any detailed planning.





## ALTERNATE DEVELOPMENT CONCEPTS

The Canyon has the resource potential to handle additional land use development--principally recreation oriented. Three alternative land use concepts were developed to demonstrate potential development possibilities for the Canyon. The first allowed full development potential while respecting the natural constraints. The second provided for a continuation of present trends with no further developments, and assumed no land exchanges. The third was a composite of the first two, placing clustered development to be consistent with the identified natural and cultural sensitivities. The alternatives individually did not entirely reflect the adopted citizen goals, but rather they recognized the inconsistencies among these goals and expressed public comment.

The three alternative land use concepts were examined in terms of their probable effect on development within the study area and their resultant effect on the total environment. The purpose of reviewing these alternate concepts was to establish a framework for the preparation of the comprehensive plan. These review comments were constructed in relation to the planning goals and objectives adopted by the Gallatin Canyon Planning Study Committee. From the directions indicated, a Synthesis Concept (Figure I-17) was prepared, drawing together elements present in each of the three alternatives.

Alternate Synthesis Concept. This Synthesis Concept calls for consideration of the Canyon as first and foremost a scenic





area, recognizing the unique natural attractiveness of this region. It allows for utilization of the probable development potential while respecting the natural environmental sensitivities. It assumed completion of land exchanges 2 and 3 resulting in large privately owned holdings in the West Fork drainage. And, it demands the utilization of natural resources to be governed by the overriding desire to preserve the natural and scenic environment, with the development of coordinated land management programs designed to carry out a multiple use program. The concept necessitates improvements to Highway 191 to accommodate better traffic movement, but with no expansion of the highway beyond the two lane concept. More pullouts and rest areas for truck and recreation vehicle traffic would be provided. It also assumes the eventual establishment of a through highway connection to the Madison Valley via the West Fork drainage area.

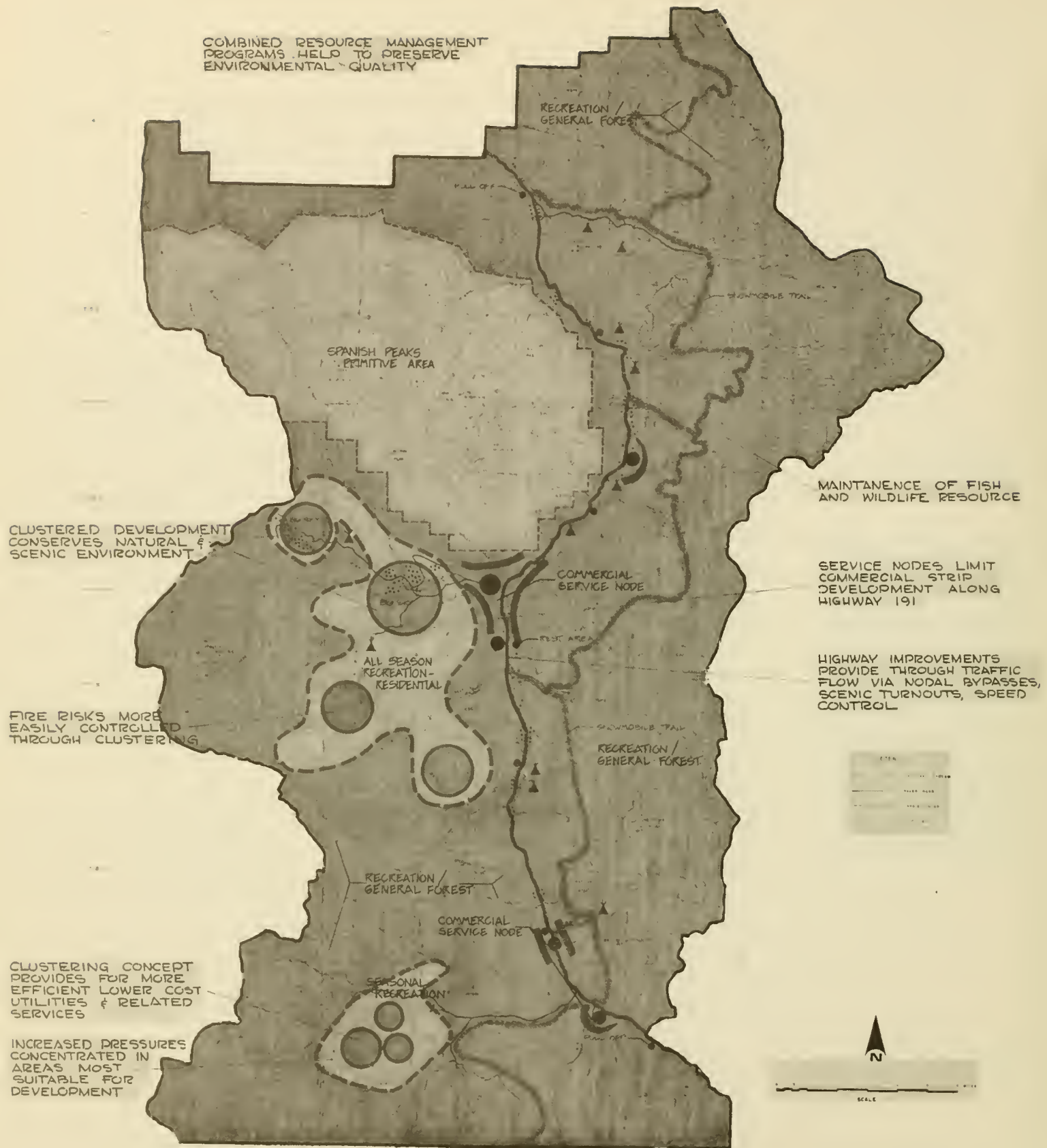
The Synthesis Concept further calls for the clustering together of any significant development, minimizing visual intrusion upon the landscape, lessening construction and maintenance costs, and limiting interference with the natural ecosystems. The concept provides for commercial services to be clustered in nodes of development at significant points along Highway 191--the major node occurring at the West Fork junction to serve that potential growth area.

A combined multiple-use management program for public and private land would be initiated to facilitate the administration of common objectives in the utilization of natural resources.





COMBINED RESOURCE MANAGEMENT  
PROGRAMS HELP TO PRESERVE  
ENVIRONMENTAL QUALITY



## ALTERNATE SYNTHESIS

# GALLATIN CANYON PLANNING STUDY

Figure I-17



While recognizing a past history of a lack of cooperation between public and private interest groups, proper management of natural resources in the Gallatin Canyon will necessitate an improvement in relations. The suggestion of a combined multiple-use management plan, called for in the adopted planning goals, could act as a vehicle toward improving cooperation.

This synthesis concept most closely follows the adopted planning goals in terms of: protecting the existing ecosystem from unnecessary alteration and disturbance; developing coordination among government agencies and private parties; and preparing land use patterns to enhance the environment of the region. Although changes must be expected in the natural environment, the clustering concept provides the best means of accommodating anticipated growth and minimizing its impact upon the natural ecosystem. This concept would accommodate the adopted planning goals and objectives to safeguard the environmental attractiveness of Gallatin Canyon.

The Comprehensive Plan was prepared from this synthesis concept.





## COMPREHENSIVE PLAN

The Comprehensive Plan is the graphic document setting forth policies that will guide the physical growth of Gallatin Canyon. This plan, in itself, is not a legal document restricted to any particular political jurisdiction; rather, it is concerned with the uses of land, the distribution of population, the intensity of building development, and the facilities for circulation which will affect all of the Gallatin Canyon planning area.

This Comprehensive Plan is general and as such, presents the approximate locations of broad types of land usage and the major elements of the Canyon circulation system. The Plan is not a specific design, but a diagram reflecting broad major development policies. The Comprehensive Plan is intended to guide growth in an active, decision influencing, action-oriented way. It will provide a base to test the logic and consistency and measure the impact of current development against the adopted citizen planning goals and the canyon environment.

It should be emphasized that the Comprehensive Plan is general; that is, it is an outline for harmonious and coordinated development, and not a rigid framework. Plan policies are stated to provide the widest possible range of choice for future specific actions and decisions. The range of choice is expected to guide decisions along a general course of development in line with the expressed goals and desires of the citizens.





The planning problems in the special environment of Gallatin Canyon are dictated by its physical limitations, limited access, climatic variations, and high percentage of land (71%) in public ownership. Implementation and management solutions will require close cooperation and coordination among all parties and agencies, both public and private.

The Comprehensive Plan consists of three elements appearing on the graphic plan following the end of this section. The plan elements, which are described in the pages following, and include:

Land Use Element;  
Circulation Element; and  
Public Service and Facilities Element.

#### LAND USE ELEMENT

The Land Use Element of the Comprehensive Plan is the key element setting forth the pattern of basic uses of land for the entire plan. The land use elements have been developed within the identified land constraints and sensitivities, and in relation to the citizen adopted general planning goals. As detailed planning studies are developed in the future, these land classifications will be more specifically defined in terms of detailed uses relating to the general category. To facilitate a clearer understanding, the Land Use Element has been divided into five sections:



1. Natural Areas;
2. General Forest Areas;
3. Residential Areas;
4. Commercial Areas; and
5. Recreational Areas.

### Natural Areas

The Natural Areas Section has been placed forefront of the Land Use Element to emphasize priority consideration. The plan designates those areas recommended as permanent open space and then considers the rest of the area for other uses. This policy is in line with the basic adopted planning goals.

Natural Areas are generally described below followed by general policy statements to be used as a guide to detailed area planning.

Riparian Areas. These encompass the permanently wet areas and flood plains associated with the Gallatin River and its tributaries. The area represents unique associations within which a delicate balance exists between water, soils, vegetation, and wildlife. Minor disturbances have the potential of destroying these unique areas. In accordance with the goals of preserving stream and river channels from unnecessary alteration and disturbance, it is recommended that all uses within riparian areas be strictly controlled.

Primitive (Wilderness) Area. This area encompasses the designated Spanish Peaks Primitive Area classified under U.S. Forest Service Regulation L-20. This area is shown on the Comprehensive Plan as the Spanish Peaks Primitive Area, and probably



soon to be classified the Spanish Peaks Wilderness Area. This area has been set aside as a significant place deserving preservation in the local surrounding environment and lies totally within National Forest Lands (assuming the favorable completion of land exchange #2). This area is proposed to continue in its present use, dispersed recreation, and to be further improved only as deemed necessary by the governing agency.

High (Elevation) Areas. This category, corresponding to the Forest Service Management Zone, "High Area," is characterized by high, rugged peaks and open ridges with scattered timber. "This zone is an important producer of water and regulator of stream flow. . . .Geologic erosion is prevalent everywhere in this zone and without doubt contributes the greatest amount of silt to the Gallatin River."<sup>1</sup> These areas are shown on the Comprehensive Plan as High (Elevation) Areas, and it is the intention of this Plan that these areas be utilized only for back-country type activities. Primary emphasis should be given to the protection of these areas as watersheds.

The following specific policies should be closely followed to help preserve Natural Areas:

- 1) Manage primarily for environmental protection and protection and recreational use, emphasizing maintenance and enhancement of the natural beauty;

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<sup>1</sup> U.S. Forest Service Multiple-Use Management Plan.



- 2) Avoid developing those areas subject to possible flooding or erosion;
- 3) Provide for permanent public access;
- 4) Direct timber management objectives toward retaining the natural character of the environment;
- 5) Limit vehicular circulation to parking and other road-end facilities necessary to provide access;
- 6) Expand trail system and related facilities to provide for the full use and enjoyment of each area; and
- 7) Provide protection to all historic and scenic sites, and to all areas of geologic and archeologic importance.

General Forest Areas. One of the major objectives of the Comprehensive Plan is to protect the timber resources and scenic beauty of the Canyon. Once the area is consumed for other uses, it cannot be replaced. These areas are shown on the plan as General Forest Areas. It is the intention of this Plan that these areas be utilized by public or private agencies and owners in such a way that the existing amenities are not destroyed. The major use activities occurring in this element are the production and use of timber and forage, and dispersed recreation uses.

Within the General Forest area a considerable number of resources and land use values are present. The area contains a rich variety of vegetation, topography, climate, scenic beauty, and wildlife. It produces important quantities of water for streams and underground storage.

It is the intention of the Comprehensive Plan to protect and



preserve the general scenic quality of the Canyon by making policy recommendation and development guidelines as called for in the adopted planning goals. Key to the quality preservation of this unique area is the initiation of a combined multiple use management program covering both public and private lands. Initiation of such a program is strongly recommended for the Canyon and should include the recommendations contained in the Final Report for forest management.

The following specific policies should be established to help preserve this General Forest environment:

- 1) Provide close cooperation in the utilization and management of both public and private lands through the development of and adherence to a combined Multiple Use Management Plan, one that clearly recognizes the potential of the land, but that is also addressed to environmental quality protection;
- 2) Give low priority to non-related land use activities, activities not directly related to timber resource management, foraging activities, and dispersed recreational activities; and
- 3) Adhere closely to the development planning and design guidelines suggested in the following Section of this report.

### Residential Areas

The general planning goals call for providing additional residential land use areas and that these be areas that enhance the relationships between development and the natural environment. Correspondingly, the Comprehensive Plan designates areas most desirable for residential development in terms of the identified





land constraints and sensitivities. It is not the intention of the Comprehensive Plan that residential development should occur only in the designated areas. However, they are designated as those areas most suitable for development under the identified parameters. They are meant to be used as a general guide in locating structures in the Canyon.

To reach the goals of maximizing the attractiveness of the developed areas and protecting the special scenic character, specific developments must be planned with care and imagination. Specific guidelines for residential development are outlined in this report in the following chapter. The local environment can best be protected by utilizing the clustering-concept of site design. It is recommended that such development be placed so as not to interfere with open meadows, and to be placed well away from the wetland areas adjacent to stream channels.

The over-all controlling element in terms of recommended residential density is the expressed planning goals to keep Highway 191 a two-lane facility. Generally the residential areas indicated on the plan are expected to accommodate one dwelling unit per 10 acres. Here the clustered housing concept which minimizes the impairment of scenic values is essential to accommodate potential growth.

The general land use concepts and development guidelines for residential development are presented in the Comprehensive Plan to:



Determine the location of future development and the general density levels;

Serve as a basis for guideline standards; and

Identify areas of conflict with existing development.

It is a recommendation of this plan that residential development adhere to the following general policies:

- 1) Cluster concepts of design should be utilized for construction to reduce unnecessary visual impact upon the environment;
- 2) Future residential development should be limited to adhere to the expressed goal of keeping Highway 191 to a two-lane facility;
- 3) Residential development should be located to avoid open meadows and keep away from riparian areas; and
- 4) Development should closely adhere to the development planning and design guidelines suggested in this report.

### Commercial Areas

The Comprehensive Plan includes the recommendation that all future commercial development and services be located in a series of "nodes" of settlement separated by expansive open space to provide definition and preserve the environmental quality. What are considered to be optimum locations for these facilities have been designated on the plan at several points along Highway 191.

Specific commercial land uses, and their functional, quantitative, spatial, and chronological aspects are not presented in this plan. Future commercial uses should identify with those



facilities and attractions that mutually support the recreational land uses and that provide needed services in the Canyon. These elements should be established on the basis of needs for various types, in certain locations, of certain capacities, and within the development guidelines. The most important consideration in terms of commercial areas relating to this Comprehensive Plan is the concept of nodal development. By limiting the spread of service facilities and separating the various "nodes" with expansive green areas there will be a minimum of intrusion into the landscape. Specific development guidelines are presented in the following chapter.

The following policy statements present the major features of commercial area development:

- 1) Encourage all commercial development to cluster in "nodes" of dense concentration along Highway 191 as shown on the plan. Do not continue strip development along the highway;
- 2) Recognize existing commercial facilities as part of the over-all pattern, but encourage only very limited expansion outside the identified "nodes";
- 3) Encourage retail facilities and service types that will support land uses identified with the Canyon (e.g.; recreational development); and
- 4) Follow the design and development guidelines suggested in this report for commercial and service development.

### Recreational Areas

The Comprehensive Plan is based on the recognition that natural features of the land predetermine the appropriate sites



for establishment of recreational and open space areas. Although the pressures for recreational use are intense and the variety of recreational potentials great, few active recreational land use areas are proposed in the Comprehensive Plan. There are significant environmental limitations constraining recreational development; but circulation and accessibility into and through the Canyon is the major limiting factor. Those categories most appropriate as major recreational areas are:

Dispersed Recreational Activities: Dispersed recreation activities are indicated on the plan as occurring within the General Forest area. The basic concept for these areas is to maintain a natural landscape. Only those facilities needed to compliment dispersed recreation activities (e.g., trails) or to protect the natural environment are recommended. The effort should be to control access and facilities, thereby limiting the number of recreation users.

Commercial Recreation. This category shows areas recommended for active recreational developments. Uses primarily oriented to recreational opportunity including overnight campgrounds, guest ranches, and incidental residential uses will be appropriate for these areas. The intention is to concentrate active recreational development in areas where it is most compatible with the natural environment, thereby maintaining the present scenic character.

Trails. An expansion of the existing trail system would be most appropriate to the need for providing more recreational



opportunities and the concept of dispersed recreation. It is the intention of the Plan that both public and private agencies and owners cooperate in providing connective trail systems throughout the Canyon. Specific policy statements concerning trails are contained under the Circulation Element.

It is the general goal of the residents to control the development of recreational land uses in the Canyon and limit them to activities which depend upon, and are compatible with, retention of the area's natural character. The following policies should therefore guide the development of recreational land uses:

- 1) Provide for only those facilities which are compatible with the area's natural landscape;
- 2) Limit the further development of public recreation facilities to be consistent with the adopted citizen planing goals;
- 3) Provide improved access and road-end facilities to all areas of recreational attraction; and
- 4) Plan recreational facilities to be consistent with the recommended development planning and design guidelines.

#### CIRCULATION ELEMENT

This element of the Comprehensive Plan presents a description of the basic circulation system for the Canyon. A major limiting factor on the future land development in Gallatin Canyon is the strongly expressed desire of residents to restrict construction





activity on Highway 191 to normal maintenance and minor improvements. This objective means that the highway will be kept to a two-lane facility, with a maximum carrying capacity figure of 4,500 vehicles per day (estimated by the Montana State Highway Department).

The Comprehensive Plan indicates only the major elements of a circulation system for the Canyon, and does not attempt to program anticipated construction. In order to insure fulfillment of the goals and objectives of the Comprehensive Plan, it is the recommended policy to:

- 1) Promote and encourage the orderly and timely development of the general circulation throughout the Canyon;
- 2) Program balanced expansion of the Canyon circulation system in terms of both need and the expressed planning goals;
- 3) Analyze thoroughly the impact of specific highway improvements on the Canyon environment prior to any actual construction activity;
- 4) Utilize the concept of low-speed recreational and scenic roadways to preserve and enhance the scenic and cultural values of the existing area environment;
- 5) Provide the recreation traveler with many opportunities for a variety of experience by providing access to supplementary areas and attractions through secondary roads branching off Highway 191;



- 6) Discourage incompatible traffic where possible by offering alternate routes more attractive to commercial or through traffic;
- 7) Ensure that the aesthetic character of all cultural elements along the highway are of the highest attainable, including both those publicly and privately owned; and
- 8) Provide a maintenance program to maintain the integrity of the surrounding environment.

Each of the major components of the Circulation Element are described in the following paragraph.

#### Highway 191

State Highway 191 handles all vehicular traffic going through the Canyon. This highway will continue to be the main element in the system. Improvements to the road should include roadside rests, turn lanes, pedestrian crossings, signed animal crossings, traffic signing, and speed control. The following policy statements outline specific objectives:

- 1) Site planning, architectural and landscape design of adjacent development should result in an attractive appearance from the highway and a harmonious relationship with the surrounding landscape;
- 2) Development along the highways should give particular attention to the node concept of site planning as expressed in the plan. Development should relate to such conditions as:

Limiting access onto the highway;  
Clustered development;  
Setback requirements;  
Screening;  
Underground utilities; and  
Appropriate appearance of advertising in relation to the environment;



- 3) Improvement to Highway 191 should be designed to provide the maximum pleasurable driving experience rather than to facilitate high speed travel;
- 4) Roadside rest areas and scenic viewpoints should be developed at relatively frequent intervals where local site conditions are compatible. Specific locations should be approved by local jurisdictions and the State Highway Commission wherever their jurisdictions are compatible in accordance with existing law; and
- 5) Maximum daytime speed control of 55 mph should be established for Highway 191 as it traverses the study area and that this limit be actively enforced by the appropriate governing agencies.

#### Proposed Highway to Madison Valley

A highway to connect the Ski Village near Big Sky on the Madison Valley near Ennis has been proposed, and is included here as a possible future element to the circulation system. The highway has not been located to date and has not been placed on any approved Federal Aid System;\* consequently, it is shown on the plan as only a diagrammatic connection to the Madison Valley. If constructed, this highway will allow improved access to Big Sky and will most probably relieve congestion on 191. It is a recommendation of this Plan that design concepts for all proposed highways adhere closely to the development guidelines suggested for Highway 191.

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\*Letter from Montana Highway Commission, February 15, 1972.



## Trail Systems

The existing trail system cater to hiking, equestrian, and snowmobile use. It is a recommendation of this plan that no new major trail systems be added and that future development be held to improving existing trails, trail linkages, and related facilities.

It is the recommended policy to:

- 1) Pursue a Canyon-wide land management program, facilitating as one element of multiple use the improvement of trail systems throughout the Canyon;
- 2) Prepare and effectuate, concurrent with the above activity, a comprehensive trail systems plan serving all recreational interests but one responsive to the natural environment sensitivities; and
- 3) Confine snowmobile recreational activity to designated roads and the existing Big Sky Snowmobile Trail and provide for no further expansion of this trail system.

## PUBLIC FACILITIES AND SERVICES ELEMENT

Public facilities and services in Gallatin County are provided in various ways through a combination of units of government and privately owned utility services. Traditionally, public utilities and services have been provided to meet the needs of the expanding community for the purpose of protecting the public health and welfare. Since the planning goals of this study give prime consideration to resource conservation, environmental protection, and ecological stability, the following recommendations have been formulated to correspond to these considerations.



The conclusions in the Resource Survey of this report indicate that responsibility to meet the expanding needs for public services will be borne largely by private parties. Sanitary waste disposal and water supply will necessarily be taken care of at local, individual sites. Solid waste disposal, fire protection, and improved medical services are also elements that will be largely left to private parties to organize.

### Water Supply

It is anticipated that water supply for domestic purposes will continue to be taken from ground and surface sources. Individual developments will be expected to provide the necessary service. Careful consideration should be given to the environmental impact that might be created by specific developments and utilization of the water resources.

To assure an adequate supply of high quality water for the future needs of Gallatin Canyon, the following policies are recommended:

- 1) Consider the impact on fish, wildlife, vegetation, and all other elements of the natural environment and provide for their protection in all water supply development;
- 2) Establish water quality baseline parameters to measure and monitor possible pollution of the surface streams and aquifers in the Canyon and take caution to avoid their pollution; and
- 3) Future high-density developments. Provide adequate water supply and waste water treatment in adherence to guidelines set by the Montana State Department of Health in all future high-density developments.





### Sanitary Waste Disposal

Like water supply, sanitary waste disposal will be the responsibility of each individual development. The same degree of attention should be given to the environmental impact of sanitary waste disposal as that given to development of water supplies. Full ecological and environmental consideration must be given to alternatives of sewage processing and disposal.

The following policies regarding sanitary waste disposal should be followed to reflect the adopted planning goals:

- 1) Avoid waste management practices which could cause an adverse impact to fish, wildlife, vegetation, and all other elements of the natural environment and provide for their protection in all waste treatment development;
- 2) Consolidate where possible waste treatment services into an integrated system;
- 3) Encourage cooperation and communication in solving management problems; and
- 4) Monitor waste effluent disposal in the streams and rivers of the Canyon and compare against established baseline parameters.

### Solid Waste Disposal

Currently there is no system for solid waste disposal other than the sanitary land fill proposed for the Big Sky development. The problems of waste disposal have been clearly recognized by residents of the Canyon and it should be a prime responsibility of these residents to investigate a means for handling disposal. It is a recommendation of this plan that no further disposal fields or land fill sites be located in the Canyon.



Some consideration should be given to approaching the solid waste disposal question on a county-wide basis. Waste transfer might be placed in strategic locations. These might be local facilities where refuse would be deposited by collection vehicles and individual citizens. As technology improves new methods of refuse management and disposal will provide alternate choices for future action.

Concerning solid waste disposal services, it is recommended:

- 1) To continue monitoring illegal disposals on public and private land;
- 2) To continue searching for long-range solutions to solid waste management, emphasizing environmental protection; and
- 3) To provide supervision of all refuse collection and disposal activities in the Canyon.

### Fire Protection

Fire protection service is currently not available to Canyon residents except by agreement with the Forest Service. Discussions between the Gallatin Canyon Association and Big Sky, Inc., have indicated the possibility of establishing a mutual aid agreement through a volunteer fire unit. This type of locally coordinated agreement would best serve the interests of all concerned.

Of the many factors controlling fire protection, only the location of stations is within the direct scope of this plan. Present and proposed land use patterns indicate the volunteer station-unit planned for location at the Big Sky development could



adequately serve the West Fork area (especially on a community volunteer basis). Proposed land use patterns outside the West Fork area do not indicate concentrations of development necessitating additional station locations. Further agreements should be negotiated with the Forest Service to provide wildland fire protection to private land, and arrangements should be made for mutual cooperation among volunteer and public fire protection units.

### Schools

The only existing school in the Canyon is the Ophir Grade School serving grades 1 - 8. Depending upon the rate of growth in the Canyon, particularly in some areas where greater development may occur, additional educational facilities may be warranted. However, it is a recommendation of this plan that no additional schools be constructed in the Canyon until such time as the increased demand warrants the construction of facilities adequate for a full eight elementary grades.

Proposed land use patterns indicate only the West Fork area as having potential growth necessitating a nearby school. Should such a need arise the school should be constructed in a central location and on a major circulation route. Specific locations and facility designs should be approved by the appropriate local jurisdiction.



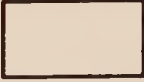










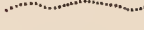



## LEGEND

### LAND USE ELEMENTS

-  RESIDENTIAL
-  COMMERCIAL
-  GENERAL FOREST
-  RECREATION  
COMMERCIAL USE  
DISPERSED ACTIVITY
-  RIPARIAN AREA
-  SPANISH PEAKS PRIMITIVE AREA
-  HIGH (ELEVATION AREA)

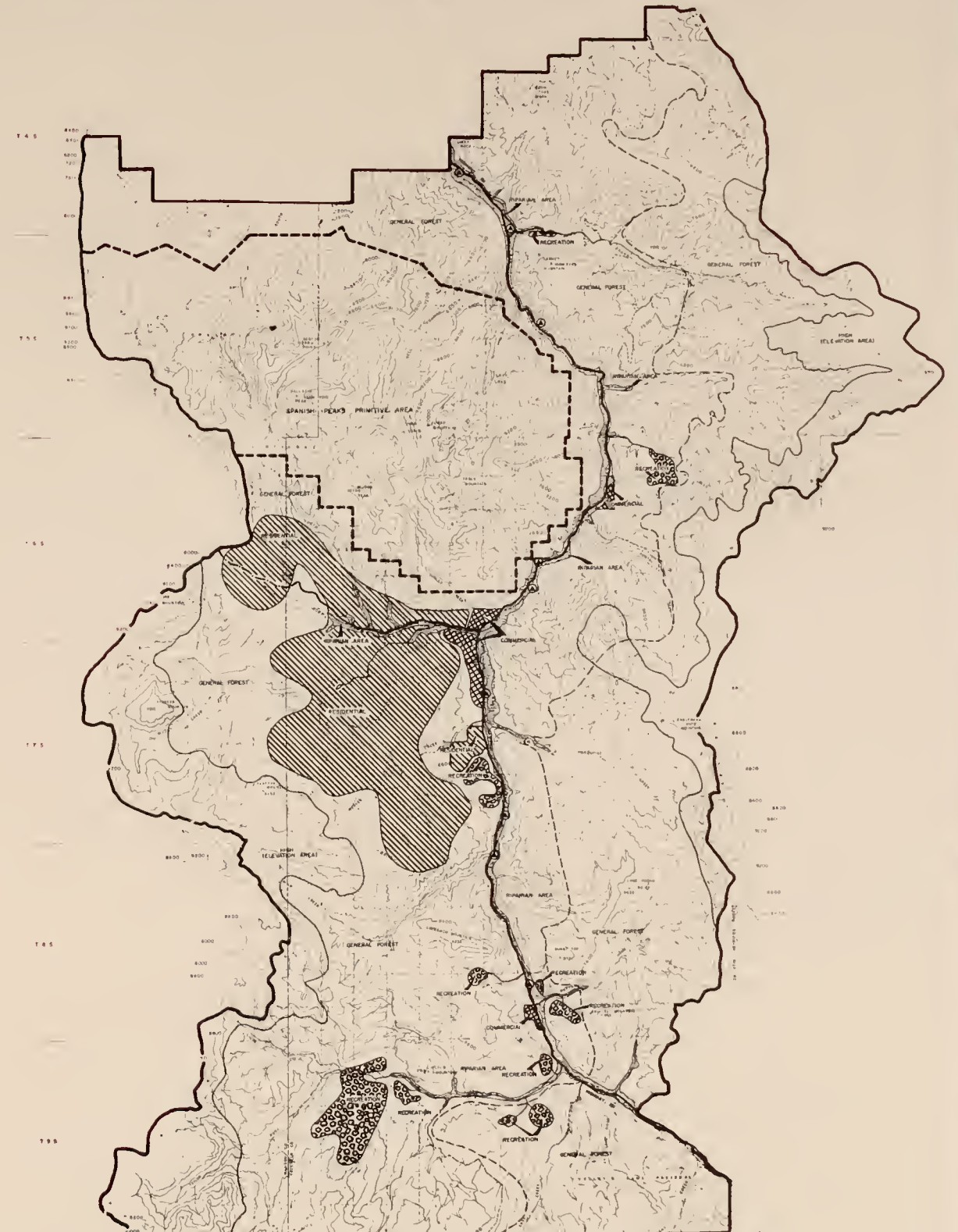
### CIRCULATION ELEMENT

-  HIGHWAY 191 AND MAIN ROADS
-  FUTURE HIGHWAY CONNECTION  
TO MADISON VALLEY
-  RECREATIONAL TRAILS
-  SNOWMOBILE TRAIL
-  HIKING / EQUESTRIAN TRAILS
-  REST AREAS, SCENIC OVERLOOK,  
AND PICNIC AREAS

# GALLATIN CANYON PLANNING STUDY COMPREHENSIVE PLAN

PREPARED FOR  
MONTANA STATE DEPARTMENT OF PLANNING  
AND ECONOMIC DEVELOPMENT

THE MURRAY-McCORMICK  
ENVIRONMENTAL GROUP   
ECOSYSTEMS ANALYSIS · PLANNING · ARCHITECTURE · ENGINEERING



LEGEND  
 HIGHWAY 191 AND MAIN ROADS  
 FUTURE HIGHWAY CONNECTION  
TO MADISON VALLEY  
 RECREATIONAL TRAILS  
 SNOWMOBILE TRAIL  
 HIKING / EQUESTRIAN TRAILS







### DEVELOPMENT PLANNING AND DESIGN GUIDELINES

The following Development Planning and Design Guidelines as recommendations provide a means to preserve the unique scenic and recreational aspects of the area, while allowing development which is compatible to the public and private interests concerned.

Guidelines present a set of environmental criteria to serve as a guide for effectuating the planning considerations developed in this study. These guidelines strive toward excellence in each element of the plan. They are intended to represent the best possible solutions to environmental problems that can then be used as a standard against which all planning and coordination decisions should be measured.

The suggested standards and sketches on the following pages are presented to illustrate the general approach to land develop-



ment and construction for Gallatin Canyon. These guidelines are not intended to impose strict limitations on site and architectural design, but to illustrate possible solutions toward protecting the basic natural resources of Gallatin Canyon.

#### NATURAL AREAS

Areas of the Canyon which are of unique scenic value or which contain areas of exceptionally sensitive vegetation, soils, or geology should be preserved in their natural condition virtually free of development.

Dispersed recreational activities such as snow play areas, trail systems, or hunting would be appropriate for the remaining open space.

The development and use of these areas by public and private interests should follow the Comprehensive Land Use Plan and Development Guidelines, suggested below, in conjunction with a Multiple Land Use Management Guide.

#### Riparian Areas

Riparian areas should be maintained free from development as they are sensitive to disturbances - especially erosion and pollution. These in turn affect the fish habitats and spawning areas.

To preserve the natural scenic values of the waterways and to protect the water quality, no waste disposal lines should be permitted within 100 feet of these areas. Over-



head utility transmission lines should be screened from general view.

To maintain the resource value and quality of the waterways, all streams should be protected through water quality monitoring and management programs.

Riparian areas are wildlife migration corridors and browse areas; therefore, access to streams should not be blocked by construction, roadways, or excessive human activity; nor should excessive clearing be allowed.

Edges of waterways and reservoirs should be maintained in natural treatment, rather than introducing materials foreign to the general area.

#### Primitive Areas

All activities within the Primitive areas should be designed to implement the multiple use management concept for primitive areas as stated in the Forest Service Multiple Land Use Management Guide.\* (A new management guide is being prepared for the Spanish Peaks Primitive Area during the spring of 1972.)

Although development within primitive areas for the convenience of users is not considered essential, some facilities are necessary to protect the environment. They might include the following:

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\*Multiple Use Management Guide. (1967.)



- Campsites to limit the extent of improper campfire practices.
- Campsite maintenance facilities.
- Sanitary facilities and trash containers.
- Hitching posts.
- Firewood supplies for heavily used camping areas.

Sites of special scenic, historical, geological, and archeologic value should be identified and protected.

#### Unstable Areas

Development in areas of unstable soil and geologic conditions should not be allowed due to the possible danger of landslide and slumps and the destruction of sensitive wildlife areas. Precautions should be taken to stabilize soils and other dangerous conditions, where appropriate. Transmission utility line locations should be restricted from these areas. Consideration should be given to replanting bare slopes and areas of high erosion with species natural to the area.

#### High (Elevation) Areas

Due to the sensitive vegetative cover and thin soils in these areas, roads should be prohibited. Trails should be located and designed so as to cause the least amount of ground disturbance.





Provide access for hunters in their pursuit of game and for other recreationists to points of interest.

The value of standing trees for watershed, wildlife, scenic or other recreational purposes should be considered in the choice of timber cutting measures for controlling fire, insects and disease.

Any lumbering practices should follow the guidelines as set in the Forest Management section; with maintenance of the scenic quality of the area as the primary objective.

#### GENERAL FOREST AREA

Development within this area should be designed to implement the criteria similar to that suggested in the Multiple Use Management Guide of the U.S. Forest Service.

Development within the General Forest Areas should include the following:

- A. Areas of exceptional scenic, historic, or geologic value should be identified and protected.
- B. Campsites, recreation areas, and residences should be landscaped so as to decrease their visual impact on the area.
- C. All utility and transmission lines should be placed underground wherever feasible. If not, they should be screened or painted so as not to be a visual blight on the area.
- D. Development should be located away from elk and other wildlife migration corridors, as they are necessary to the total wildlife habitat.



## RESIDENTIAL AREAS

Future residential development within the Canyon should be in clusters as opposed to typical subdivision patterns. The intent is to keep the impact of the development on the natural landscape to a minimum and to create the least possible visual impact. Cluster housing and development would help concentrate man's activities resulting in less disruption of the natural landscape and wildlife habitat.

Non-clustered development should not be allowed to continue especially along major highways. All development should be adequately screened from major roads and highways to protect the scenic visual qualities of the Canyon.

Any proposed development should adhere in its purpose and design to the Comprehensive Plan or to the various elements included or to the area plan of the particular location in which the proposed development is to be constructed.

Clustered Development. Design criteria for such developments should include consideration of the following guidelines:

- A. Separate automobile, pedestrian, and equestrian travel on the site;
- B. Hide building clusters from view of motorists by:
  - 1) Natural vegetation;
  - 2) Landscaping;
  - 3) Terrain; or
  - 4) A setback of at least 100 feet from nearby roads; and





FUTURE RESIDENTIAL DEVELOPMENT IN GALLATIN CANYON SHOULD ADHERE TO THE CLUSTER CONCEPT AS OPPOSED TO TYPICAL SUBDIVISION PATTERNS. THE INTENT IS TO KEEP THE VISUAL IMPACT OF DEVELOPMENT ON THE NATURAL LANDSCAPE TO A MINIMUM.



- C. Encourage use of different types of living units within concentrated areas.

### General Criteria

Higher density developments are to be considered as particularly suitable to areas where there is direct access or proximity to community facilities and circulation, and/or commercial services.

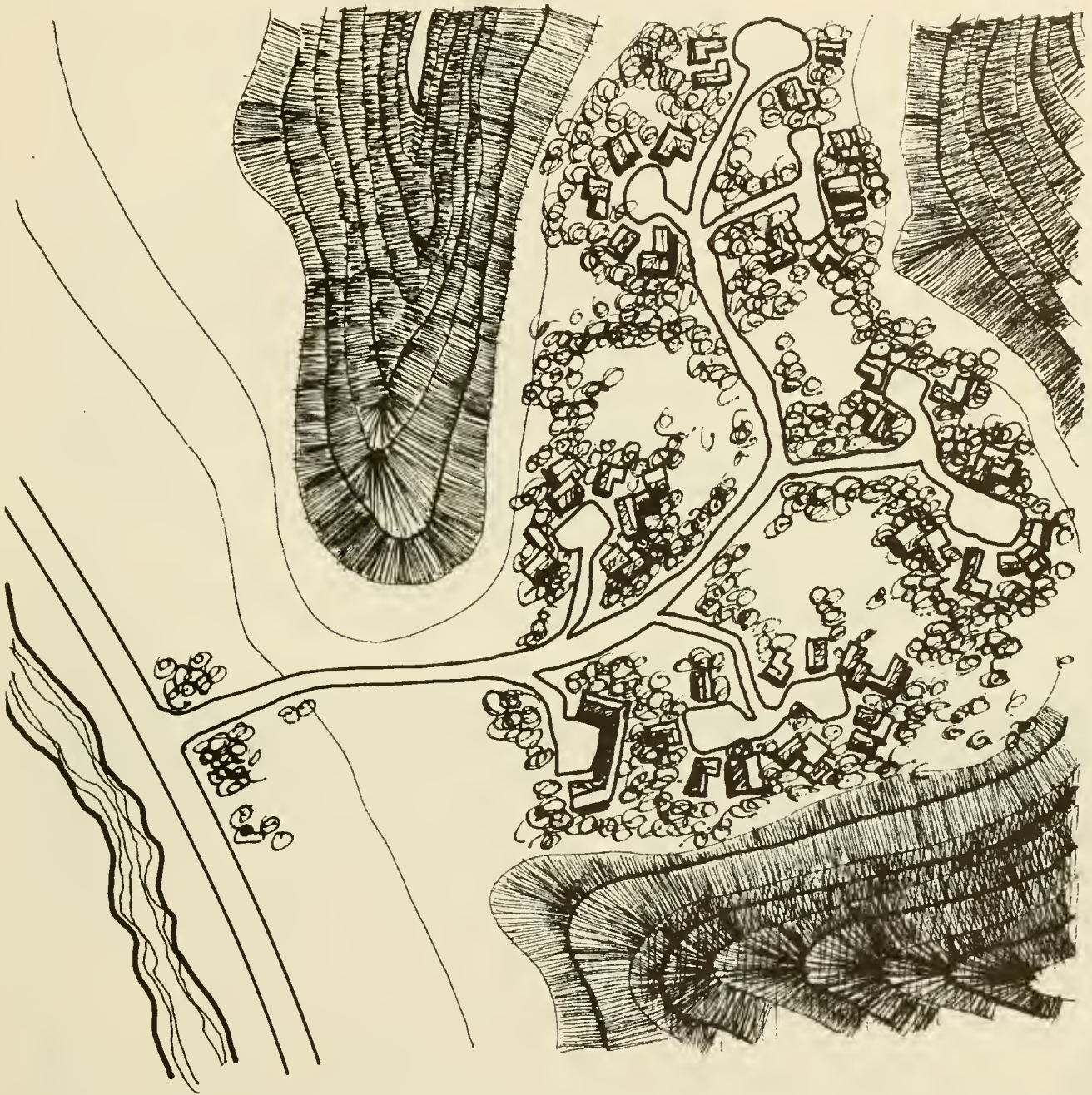
Lower density developments should utilize areas where there are steep slopes, canyons or mountainous terrain, and where there is restricted accessibility to service facilities.

Design criteria for both clustered and non-clustered development should include the following:

- A. Plan development features to coincide with the natural environmental features and designed in such a way as to diminish the visual impact of such development;
- B. Incorporate natural features (such as rock outcroppings, ridges, hillocks) as much as possible into the design of any development;
- C. Retain and manage open space as a valuable resource;
- D. Utilize sloping topography wherever possible, and vegetation to screen or soften the visual impact of building construction;
- E. Minimize the harmful effects of water runoff, including soil erosion, by the use of landscaping and/or drainage systems. (Effectiveness of these systems should be judged by the extent to which they minimize their effects on surrounding land. The transfer of runoff problem to other properties should not be considered an appropriate solution);
- F. Discourage extensive grade and fill operations which substantially alter the topography of a site;







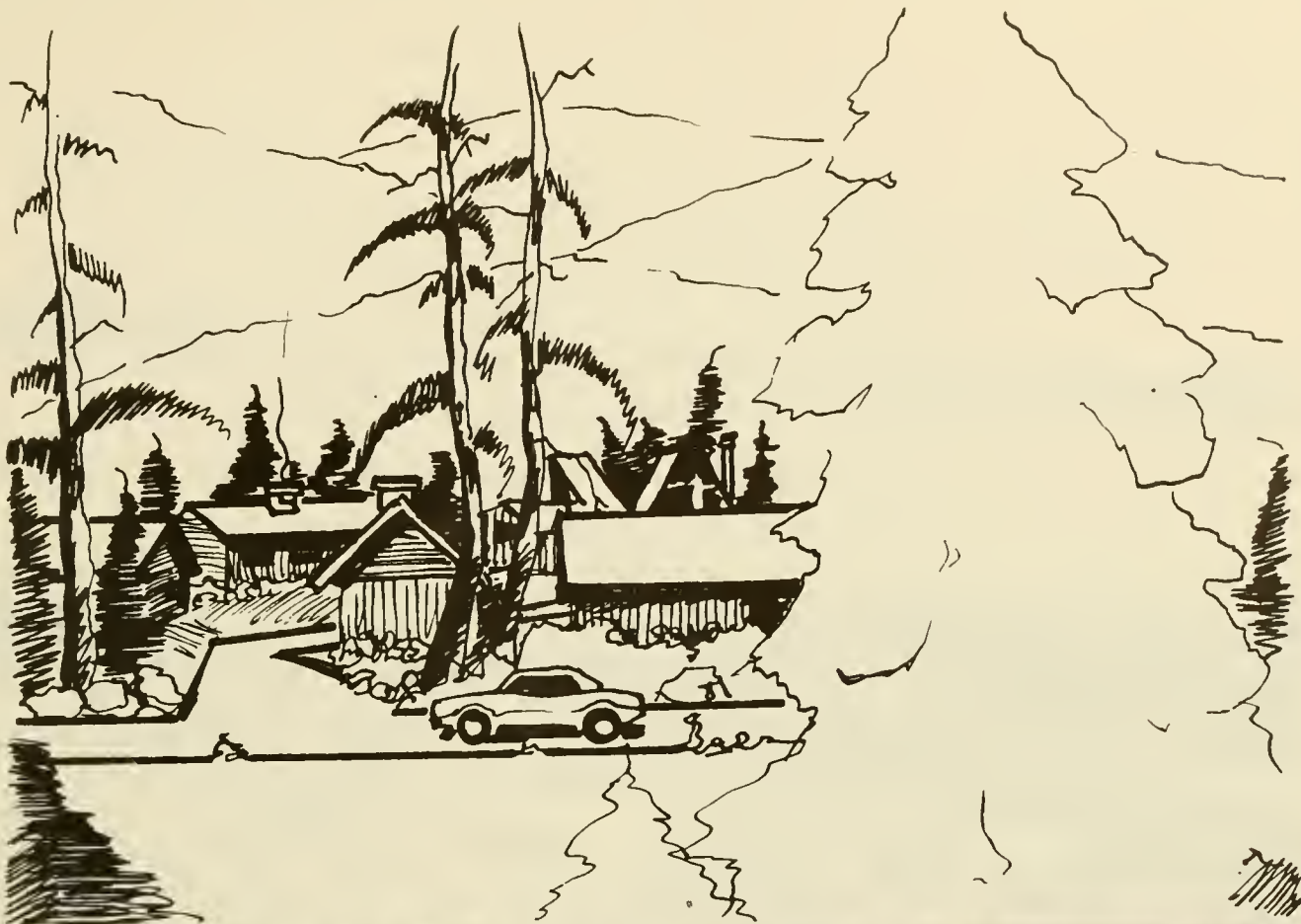
DENSE CLUSTERED DEVELOPMENT IS TO BE CONSIDERED AS PARTICULARLY SUITABLE FOR DEVELOPMENT IN THE CANYON. BUILDING CLUSTERS SHOULD BE LOCATED AWAY FROM OR ON THE EDGE OF OPEN MEADOWS, AND IN SUFFICIENT TREE COVER FOR SCREENING PURPOSES. SUFFICIENT SETBACK SHOULD BE MAINTAINED FROM MAIN ROADS SO AS NOT TO INTERFERE WITH THE VISUAL SCENIC QUALITIES OFFERED BY THE LANDSCAPE.





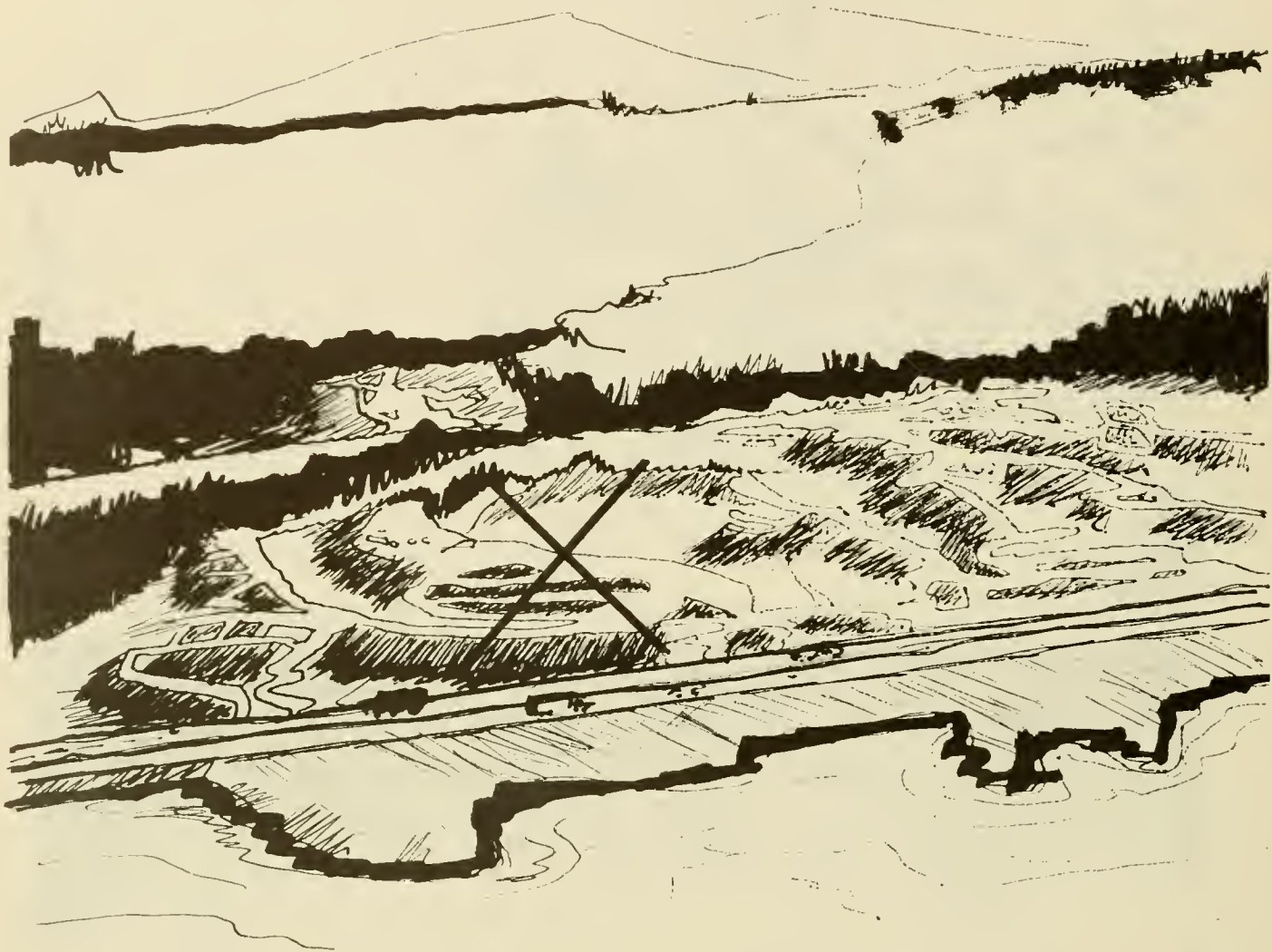
- G. Limit access to major roads from adjoining property (numerous curb-cuts along the highway should be avoided by orientation of dwelling units to frontate roads or single accesses serving several properties);
- H. Fringe parking areas or other large paved areas with plant materials or earth landforms to diminish the visual impact of such development. (All possible vehicular hazards to pedestrian should be eliminated.);
- I. Use natural or compatible building materials throughout the project in various textures and compliment by the use of earth tone stains in a manner to create a weathered but warm appearance throughout;
- J. Use plant materials found only in the natural landscape;
- K. Incorporate setback lines for buildings or structures along the main road (exact distances to be determined from the use area and frontage access);
- L. Use protective erosion control measures for buildings, roads, parking lots, and recreational facilities;
- M. Employ screening methods or underground installation for all new utility services (wherever possible also do the same with existing lines);
- N. Protect sound, healthy trees and ground cover vegetation;
- O. Provide for non-intervention with and the retention of, natural drainage flows;
- P. Develop interest and variety in architectural silhouettes;
- Q. Orient buildings toward views wherever possible;
- R. Provide for fire suppression and control methods;
- S. Prevent incompatible use of land and disruptive non-residential traffic from intruding upon residential areas;
- T. Encourage collective private driveways where their utilization will result in better building sites and lesser amounts of land coverage than would result if a public road were required; and
- U. Do not encourage future mobile home development within the Canyon, and where they are presently located, screen completely from adjacent land uses.





WHERE BUILDING CLUSTERS ARE LOCATED ADJACENT TO MAIN ROADS, THEY SHOULD BE GENERALLY SCREENED BY LANDSCAPING AND EARTH-FORMS. SEVERAL BUILDINGS SHOULD UTILIZE ONE DIRECT ACCESS TO MAIN ROADS TO ELIMINATE NUMEROUS CURB CUTS AND TO CREATE LESS TRAFFIC INTERFERENCE.





DISCOURAGE EXTENSIVE GRADING AND FILL OPERATIONS WHICH SUBSTANTIALLY ALTER THE TOPOGRAPHY OF A SITE. INSTEAD, UTILIZE NATURAL LANDSCAPE FEATURES SUCH AS SLOPING GROUND, ROCK OUTCROPPINGS, AND VEGETATION AS MUCH AS POSSIBLE INTO THE SITE DESIGN OF ANY DEVELOPMENT. PROPER SITE TREATMENT WILL MINIMIZE THE HARMFUL EFFECTS OF WATER RUNOFF AND SOIL EROSION.





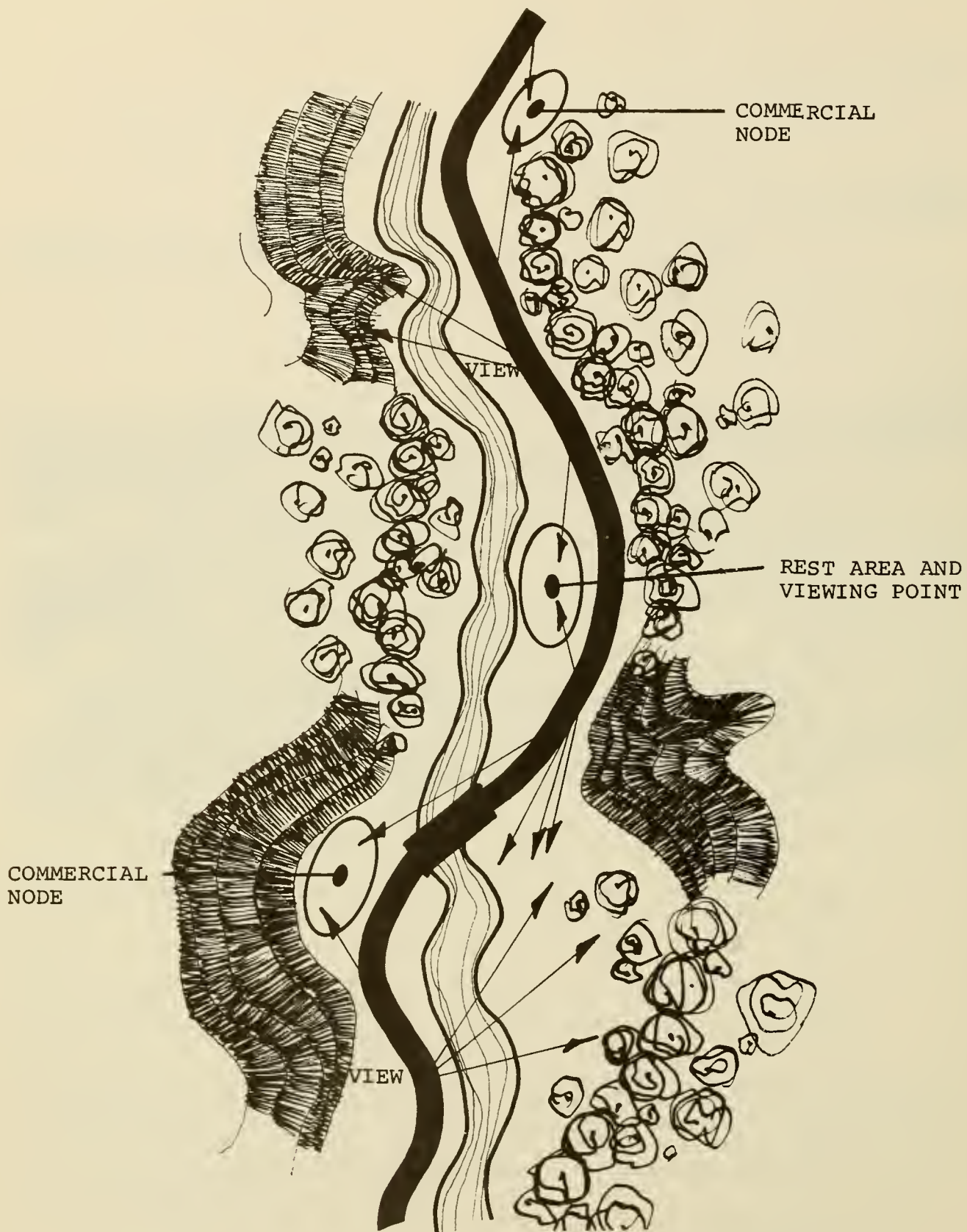
## COMMERCIAL AREAS

Commercial development should be restricted to nodes along Highway 191 to prevent unsightly linear development of service areas on the major roads.

Basically, the same criteria as proposed for residential cluster developments will apply to commercial facilities. They area:

- A. Select architectural styles and building materials and colors compatible with the natural environment;
- B. Allow the architectural theme to be the primary identifying factor (architectural treatment is important to the appearance of the project or building, and a unifying theme should be maintained throughout the project).
- C. Develop three-dimensional visual interest for identification;
- D. Design building clusters to diminish the visual impact of such development on the major roadways;
- E. Adhere to setback lines for buildings or structures along Highway 191, to be determined from the use area and frontage access;
- F. Select a site large enough to provide ample parking;
- G. Fringe parking areas or other large paved areas with landscaping to diminish the visual impact of such development;
- H. Retain as much of the natural environment as possible by leaving native ground cover in buffer zones; designing cuts and fill to reflect the natural topography; and avoiding excessive site preparation;
- I. Limit direct access points to Highway 191 based on safety to travelers on the road;
- J. Limit interference with natural drainage flow;
- K. Do not clutter development; provide ample room for expansion;

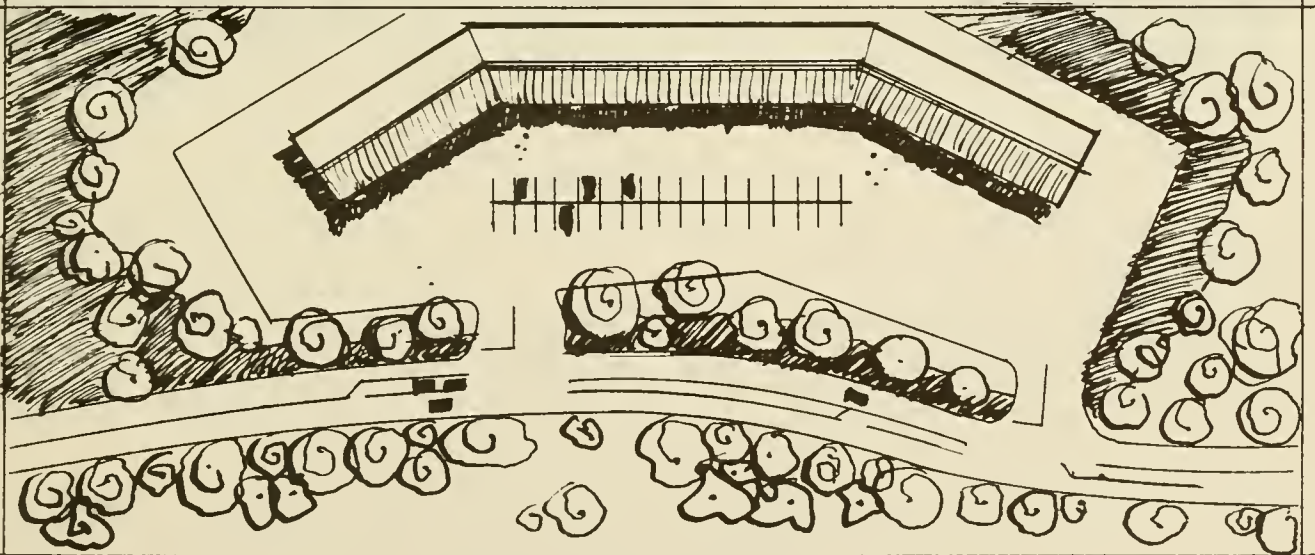




UTILIZE "NODE-CONCEPT" OF SITE LOCATION FOR COMMERCIAL-SERVICE FACILITIES. THIS IS SUGGESTED IN EFFORT TO ELIMINATE CONTINUOUS COMMERCIAL-STRIP DEVELOPMENT ALONG THE HIGHWAY. LOCATE ROADSIDE REST AREAS AND VIEWING POINTS AT APPROPRIATE SPOTS ALONG THE HIGHWAY.







COMMERCIAL DEVELOPMENT SHOULD BE DESIGNED IN AN ARCHITECTURAL STYLE COMPATIBLE WITH THE NATURAL ENVIRONMENT. BUILDING CLUSTERS SHOULD BE GENERALLY SCREENED FROM THE ROADWAY BY RETAINING AS MUCH OF THE NATURAL LANDSCAPE AS POSSIBLE. ONLY VEGETATION NATIVE TO THE AREA SHOULD BE USED IN LANDSCAPE TREATMENT. SIGNING SHOULD ADHERE TO THE SUGGESTED GUIDELINES AND SHOULD NOT BE DOMINANT IN APPEARANCE.



- L. Provide screening and light shielding for adjacent residential property;
- M. Provide for landscaping and revegetation due to construction activities;
- N. Use signing restrictions (see special section regarding Signing Control);
- O. Design the complex to be attractive from all directions;
- P. Provide underground power and telephone services; and
- Q. Make provisions for erosion control fire protection, safe sewer and water operation.

#### RECREATIONAL DEVELOPMENT

Locate public recreation facilities at a sufficient distance from "streams, trails, and other natural attractions to allow appropriate use without unacceptable depreciation of the focal point of public interest."<sup>1</sup>

#### Campgrounds

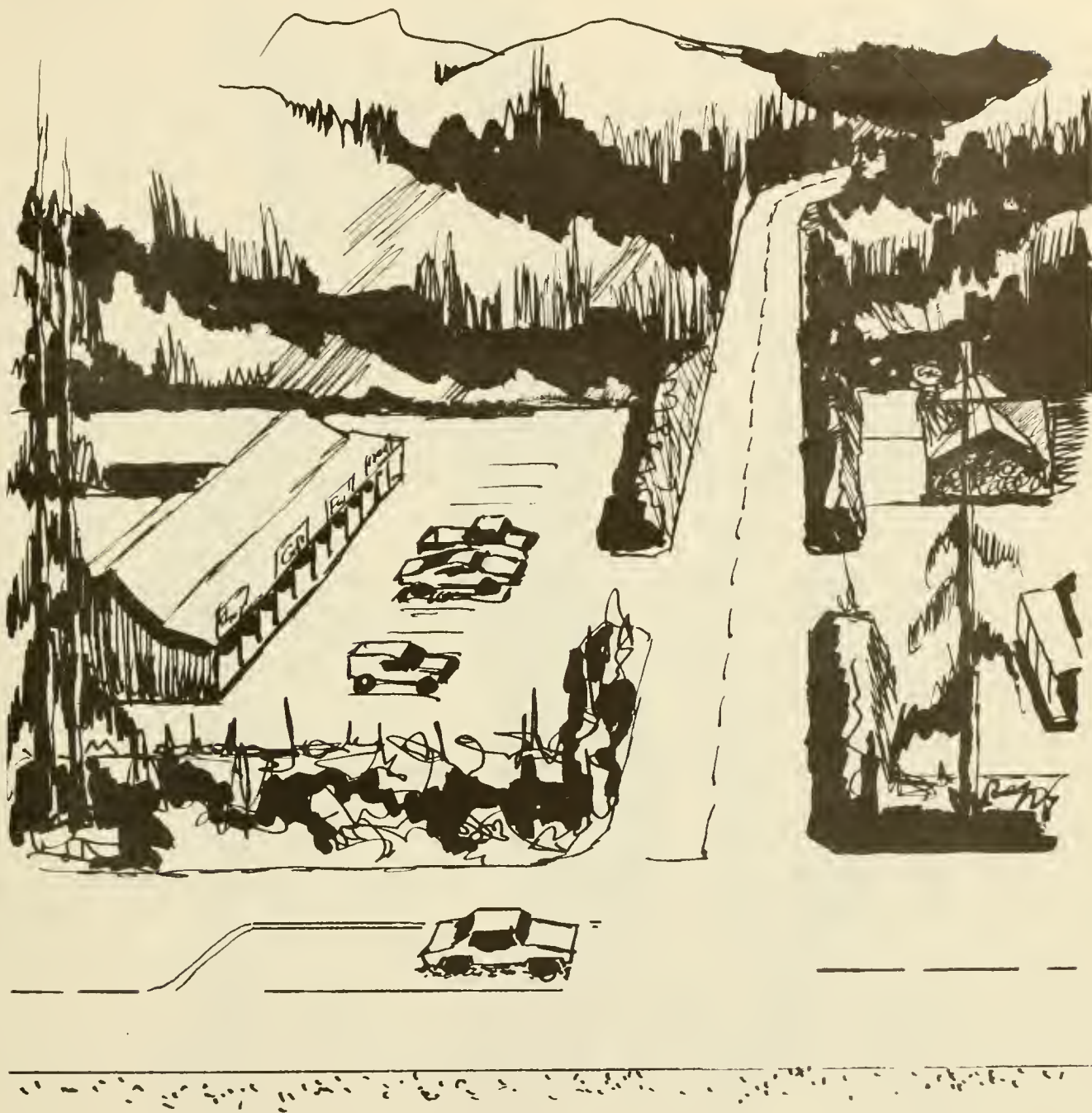
Campground units should be spaced to preserve the natural state of the area and to provide a "camping out" experience. They

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<sup>1</sup>Forest Service Multiple Use Management Guide. (1967.)







COMMERCIAL-SERVICE DEVELOPMENTS SHOULD BE LOCATED ON SITES LARGE ENOUGH TO PROVIDE FOR RELATED FACILITIES AND EXPANSION. DIRECT ACCESS TO THE HIGHWAY SHOULD BE HELD TO A MINIMUM UTILIZING SIDE ROADS WHEREVER POSSIBLE. THE COMPLEX SHOULD BE DESIGNED TO BE ATTRACTIVE FROM ALL DIRECTIONS, AND ADHERING TO ALL THE SUGGESTED DEVELOPMENT GUIDELINES.



should be on fairly flat terrain but surrounded by more variable terrain. All campgrounds should contain a potable water supply and sanitary facilities as a basic minimum requirement.

Plans for campgrounds should include:

- A. Develop suitable methods for sanitary and solid waste disposal and in accordance with County Forest Service standards;
- B. Employ fire breaks and fire safety planning (along with stove design and campfire regulations are to be in keeping with the U.S. Forest Service requirements);
- C. Use dust control measures;
- D. Use erosion control and replanting where possible in areas where the natural vegetation has been removed;
- E. Provide sources of firewood to protect the local timber and vegetation;
- F. Use simple log barriers at the end of parking pads to prevent the encroachment of vehicles;
- G. Provide firepits at each campsite;
- H. All campground areas should be clear excess brush snags, and hazardous trees;
- I. Ensure that campgrounds constructed in the wildlife corridor should not be utilized until spring each year;
- J. Provide comprehensive fire plan, and post pertinent regulations, and enforce strictly by the management staff; and
- K. Provide maintenance and supervision.

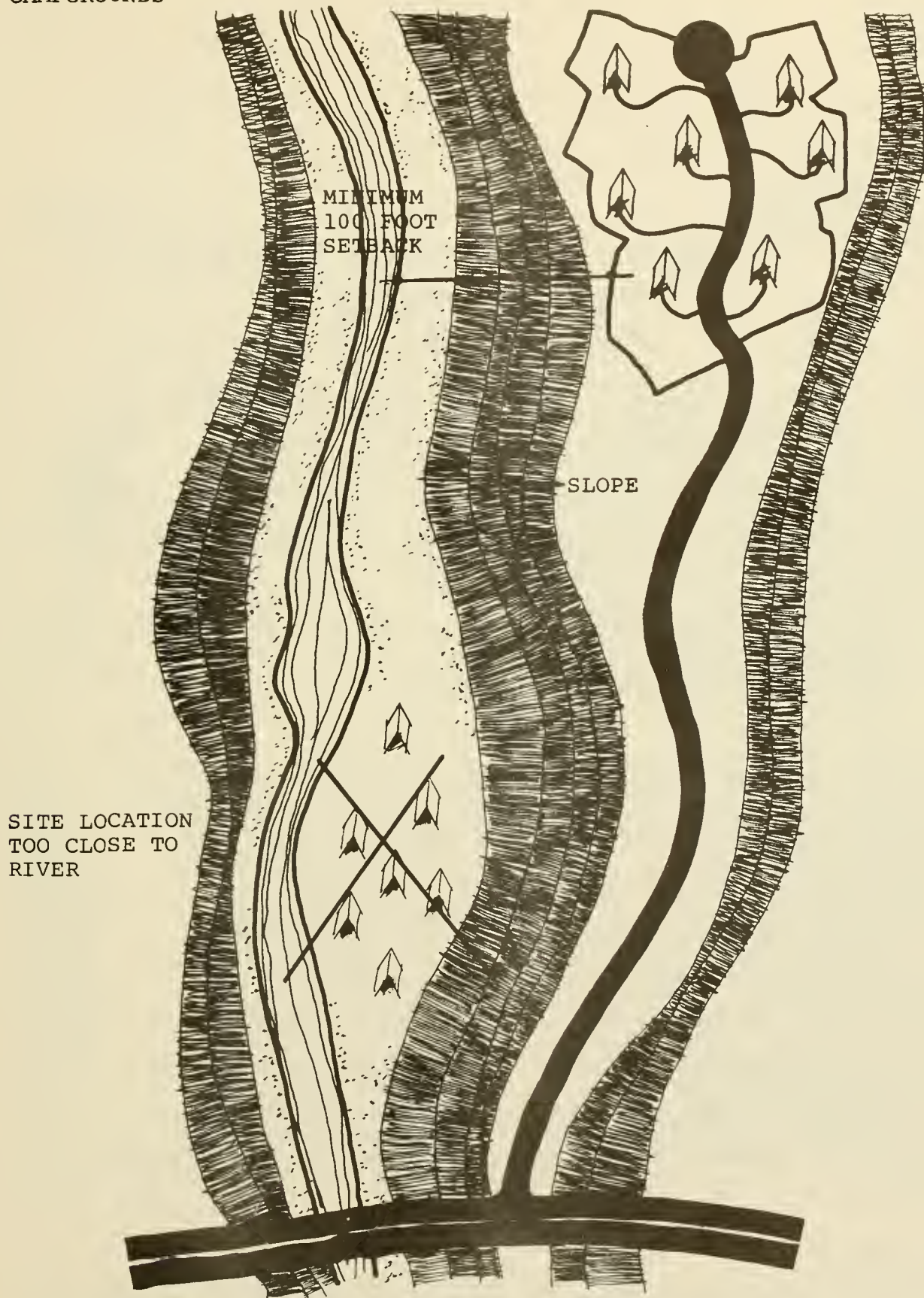
### Picnic Areas

Picnic areas should be day-use areas located in areas of similar compatible land use such as camp and resort areas, rest





## CAMPGROUNDS



CAMPGROUND UNITS SHOULD BE SPACED TO PRESERVE THE "NATURAL-STATE" OF THE SITE, AND YET BE CLOSE ENOUGH FOR THE NECESSARY RELATED SERVICE AND SANITARY FACILITIES.





areas, and scenic vista points. The minimum required facilities should be tables, fire pits, drinking water, and sanitary facilities.

A picnic area may consist of one facility or many but the same principles apply. There should be advanced signing and ease of turnoff and parking. Physical and psychological separation from the main roadway by earth mounds and plantings of native materials is suggested.

The pavement for approach exits and parking should be natural appearing, asphalt, or loose pebbles. Adequate siting in area must be provided.

The areas should be located near distinctive landscape features that provide opportunities for choice of picnic table locations. Whenever possible advantage should be taken of natural shade. Fire control around picnic tables should be designed.

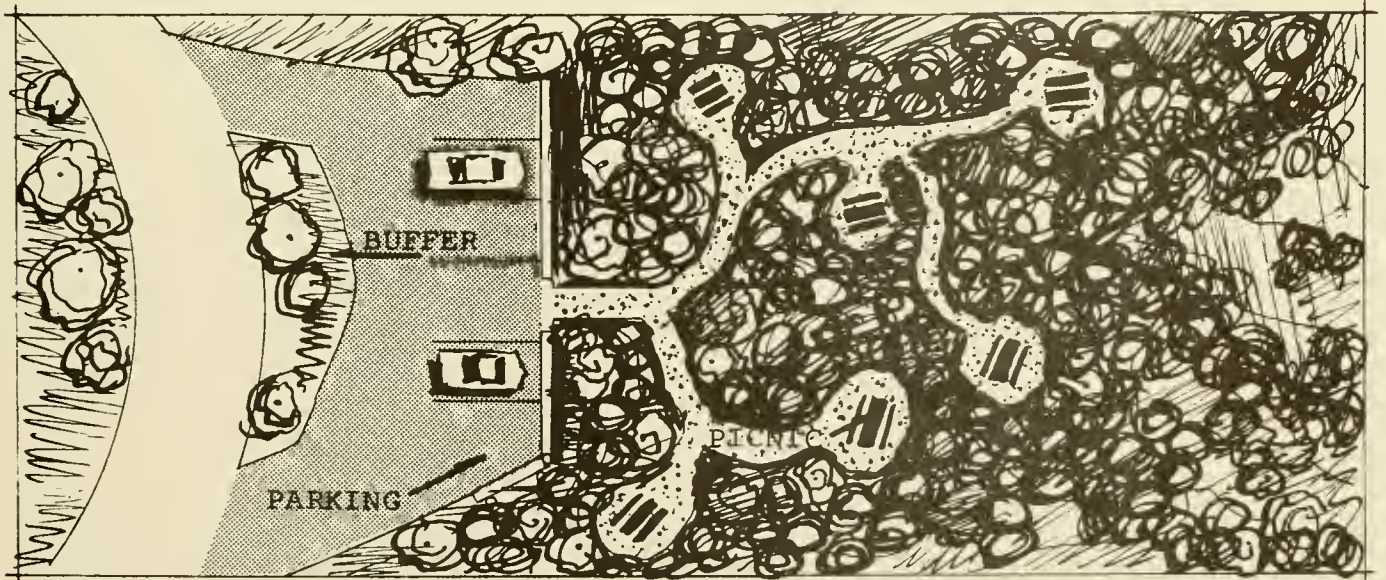
#### Motel and Tourist Facilities

Motels and tourist facilities should be combined with other commercial uses in the commercial service nodes, near summer home areas, and by public campgrounds. They should have good vehicle access, together with adequate parking space and landscaping. Where feasible, they should be combined with other recreational facilities such as tennis courts and riding stables.

#### Guest Ranches

Guest ranches should conform to the design and development guidelines suggested for residential development. They should





ROADSIDE REST AREAS SHOULD BE LOCATED ALONG HIGHWAY 191 AT APPROPRIATE LOCATIONS. FACILITIES FOR THE REST AREAS SHOULD BE ARCHITECTURALLY AND ENVIRONMENTALLY HARMONIOUS WITH THE REGIONAL LANDSCAPE.



be located so as to minimize any potential conflict with adjacent and surrounding land uses. Guest facilities should be designed solely for resort-type use --- never to include individual dwelling facilities, except as required for management. Adequate access, parking, and related recreational facilities should be provided. All guest ranch development should be designed in the cluster concept.

#### Snow Play and Recreation Areas

The following list summarizes the recommended guidelines for snow play areas:

- A. Locate snowmobile runs away from populated areas;
- B. Provide adequate off-road parking for autos and trails;
- C. Provide sanitary facilities for participants and adhere to sanitary regulations;
- D. Follow erosion control measures;
- E. Provide maintenance and supervision;
- F. Avoid placing snow play areas on southerly aspects and conversely place as many winter camping spaces on southerly slopes as possible; and
- G. Select ski trails to minimize the clearing of vegetation.

#### CIRCULATION

##### General Highway and Road Development

The following list summarizes the areas of greatest concern







HIGHWAY IMPROVEMENTS SHOULD BE DESIGNED TO ACCOMMODATE THE SUGGESTED DEVELOPMENT GUIDELINES. UTILITY LINES SHOULD BE PLACED UNDERGROUND OR LOCATED SO AS TO HAVE A MINIMAL IMPACT UPON THE VISUAL FIELD. A STANDARDIZED SYSTEM OF ROAD SIGNS SHOULD BE UTILIZED, AND THEY SHOULD BE OF A CHARACTER UNIQUE TO THE REGION.



for the proper development and protection of the surrounding environment:

Highways:

- A. Provide a right-of-way of sufficient size to contain:
  - Two paved travel lanes (highways should not exceed two travel lanes);
  - Shoulders;
  - Safety and snow storage strips;
  - Pathways for safe pedestrian-equestrian movements, when necessary, and with ties to external trail systems; and
  - Screening and landscape treatment of unsightly roadway construction scars.
- B. Use native vegetation to cover and screen, and use other devices to hide the scars of roadway cuts;
- C. Revegetate old borrow pits and haul roads to eliminate any scars on the landscape;
- D. Locate roadside rest areas, wayside picnic areas, and scenic viewpoints where the topography is compatible for the use of motorists.
- E. Ensure that all architectural and engineering elements relate pleasantly and are in harmony in material, color, and form to the local environment;
- F. Hold intersections with side streets and major thoroughfares to a minimum (where they must intersect, cross and left-turn movements should be limited by median and left-turn lanes. Roadside rest areas, wayside picnic areas, and scenic overlooks should be located at intervals where topography is compatible. Criteria for selection of these areas will involve topography, character of view, possible multiple uses to reduce numbers and costs and safety); and





- G. Limit access to the street from adjoining properties (numerous curb cuts along the street should be avoided by utilizing single accesses serving several properties).

#### Secondary Roads and General Construction

- A. Locate roads to avoid traversing open meadow areas;
- B. Include the consideration of the need for elk and deer movement on slopes in road location and design and do not create travel barriers for big game animals;
- C. Require stringent clearing specifications compatible with the aesthetic values of the landscape;
- D. Minimize cut and fill slopes when feasible and utilize one-way roads to eliminate unnecessary road widths;
- E. Utilize previous road gradings when they can be effectively incorporated into the over-all design and they do not exceed excessive gradients;
- F. Provide rock bases and adequate cross drainage on seasonal roads;
- G. Treat seasonal, non-surfaced roads with a non-toxic or low-toxic chemical for dust control;
- H. Provide at least a 1-1/2 lane road standard on main and alternate fire access roads. All fire access roads should not be open to the general public and should have appropriate signs);
- I. Do grading or earth moving operations with a minimum of disturbance to the natural ground which might result in unnatural forms; and
- J. Protect residential areas from unnecessary vehicular noise disturbance and air pollution by providing sufficient right-of-way for protective screening.

#### Rest Stops

Facilities for rest area should be architecturally and environmentally harmonious with regional scenic landscape.

Traditional solutions for structures should be respected. Wood



siding, stone foundations, and roofing could all be interpreted within modern physical requirements without resorting to contorted image design.

### Scenic Overlooks

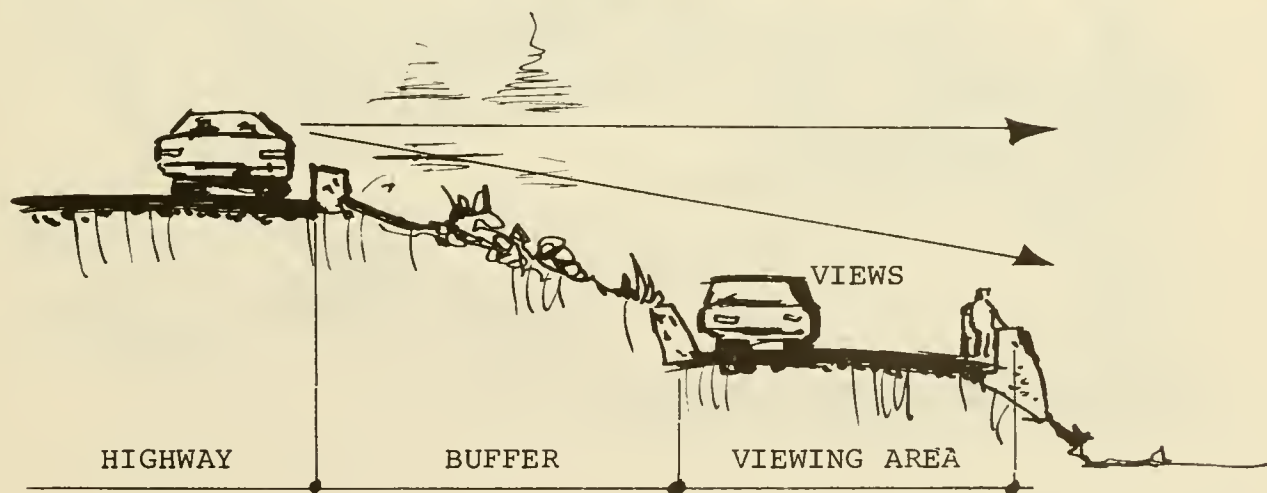
Scenic overlooks should be located throughout the Canyon wherever site conditions suggest their location. Convenient parking for cars within the view areas should be provided, including separation between in-car viewing and out-of-car viewing. Views of the parking area from the roadway should be minimized. Lowering of the viewing area below the roadway traffic lanes allow for moving motorists to view over the parking area. The cars would be concealed below a low wall not interrupting the view behind the parking lot. Lowering of viewing area also cuts down filling and possible erosion problems on sloping sites. Properly located distinctive signing should give adequate advance notice of ingress points.

Materials should reflect what is locally available. Rock and ground cover should blend naturally with grasses for erosion control. Rock and wood walls should conform to regional expression of uses of materials. Natural landscape colors can be used to advantage in framing and screening of views.

### Recreational Trails

An integral part of the Canyon is its network of recreation trails. Hiking and equestrian trail links have been suggested as





FREQUENT SCENIC OVERLOOKS SHOULD BE PROVIDED ALONG HEAVILY TRAVELLED ROADS. THEY SHOULD BE CONSTRUCTED WHEREVER PARTICULAR SITE CONDITIONS SUGGEST THEIR LOCATION. ENTRANCE AND EXIT POINTS SHOULD BE CLEARLY MARKED, AND CONSTRUCTED SO AS NOT TO INTERFERE WITH NORMAL HIGHWAY MOVEMENT.







AN INTEGRAL PART OF THE CANYON IS ITS NETWORK OF RECREATION TRAILS. PHYSICAL DESIGN SOLUTIONS SHOULD REFLECT THE NEED FOR PHYSICAL AND PSYCHOLOGICAL SEPARATION, ORIENTATION, AND DESIGNATION POINTS. PARKING FACILITIES SHOULD BE PROVIDED AT MAJOR ACCESS POINTS TO THE TRAIL SYSTEMS.

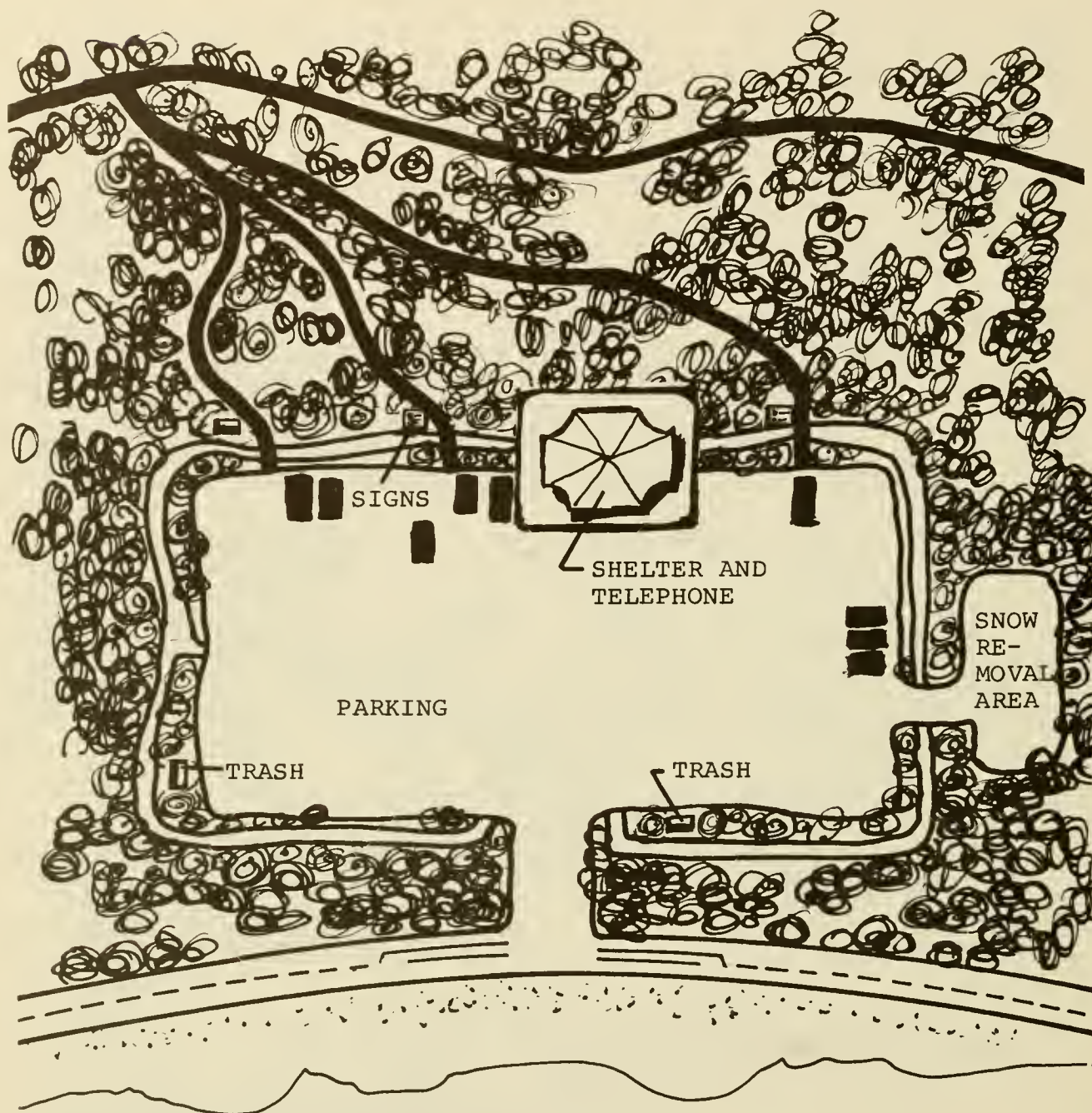




linking elements between recreational features in the Canyon area. Physical design solutions should reflect the need for physical and psychological separation, orientation and designation points.

- A. Construct access roads which serve intensive recreation areas to good safety standards and of sufficient width to handle the volumes of traffic anticipated;
- B. Continue to conserve the Primitive Area presently maintained by the U. S. Forest Service in its natural state (foot and horse trails should remain the sole method of access to this area);
- C. All motor vehicles should be restricted to existing roads and trails. Restrict off road vehicles to paved surfaces within the Canyon (uncontrolled access by these types of vehicles in this area would result in very serious erosion problems);
- D. Supervise and maintain all trail systems;
- E. Provide adequate access and parking facilities for all trail systems (paved parking facilities should be provided for users of the Big Sky Snowmobile Trail);
- F. Clear a right-of-way of eight to ten feet for new heavy-use trails (this makes trail maintenance easier and encourages an undergrowth vegetation along the trail);
- G. Do not fell trees except when it is impractical to build around them;
- H. Take care to avoid unnecessary disruption of trail side areas when mechanical means are used to clear the trail;
- I. Use simple methods of interpretive sign presentation along trails (interpretive signs should be carefully designed and placed for minimum visual intrusion upon the landscape);
- J. Build trails to follow contour of the land (unless heavily used trail surface, material should be made of native material or grass in heavy use areas, woodchips, fine shale, gravel, or crushed rock may be used).





ADEQUATE PARKING AREA SHOULD BE DEVELOPED TO SERVE PUBLIC RECREATIONAL USE FACILITIES (i.e., BIG SKY SNOWMOBILE TRAIL, ETC.). INFORMATIONAL SIGNING, TRAIL MAPS, SHELTER, TELEPHONES, AND RELATED FACILITIES WOULD BE NECESSARY TO SUCH AN AREA. ENTRANCE AND EXIT POINTS FROM THE HIGHWAY SHOULD BE CLEARLY MARKED AND CROSS-TRAFFIC TURN LANES PROVIDED. LARGE PAVED AREAS SHOULD BE VISIBLY SCREENED FROM GENERAL VIEW.



## GENERAL CONSTRUCTION GUIDELINES

Preserve notable landmarks, and areas of historical architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past developments.

Match development to land capabilities; developments should be located on sites which meet requirements naturally, thus obviating the need for grading, earth moving, landscape planting and the like.

Care should be taken so that houses, service stations and other inappropriate structures do not preempt the few sites that would be best for schools, open space, historic sites, and scenic rest areas.

Unsightly uses such as junk yards should not be allowed. Those existing or indispensable unsightly uses should be inconspicuously located or screened from the highway and residential districts by effective planting, grading, and fences.

Quarries and other excavations should not be visible from the road. Those close to the roads should be screened from view. Abandoned quarries and excavations should be restored to an attractive appearance through landscape design.

All landscaping for buildings or roads should be keyed to the natural plant communities found in that area. Existing specimens and stands of trees and other plant materials of outstanding value should be identified and preserved.





If areas are cleared for access to subsoil material, the topsoil should be saved (this includes parking lots, building sites, and new roadways) for replanting of the area and landscaping.

All structures should be designed to take into account snow loads of 200 pounds per square foot.

## PUBLIC FACILITIES AND SERVICES

### School Construction

All school sites should provide isolation from noise, dust and traffic hazards. Each site should be easily accessible to the areas it serves and properly protected from traffic and other accident hazards.

Each site area should be sufficient to provide adequate space for all school facilities and activities. The land area for an elementary school should be five acres to serve up to 300 students plus one acre for each additional 100 students. Middle schools up to 300 students, ten acres, plus one acre for each 100 additional students.

Equally important, are some additional suggested standards for use in selecting or developing the school sites:

- A. Work with the landform as opposed to grading it into a single flat pad where terrain on the site is rolling;
- B. Retain significant vegetative features;





- C. Design paved pathways, court game areas, parking lots and other areas where significant soil disruption is contemplated with provision erosion controls;
- D. Incorporate architectural design and material which fit the landscape of the Canyon into school designs; and
- E. Avoid chain link fences around school sites.

#### Solid Waste Disposal

Until such time as a proper and suitable means is found to take care of solid waste disposal it is recommended that all solid wastes be "exported" to existing disposal sites outside the Canyon.

#### Sanitary Waste Disposal

Construction of drainage systems and sewers should be done in a manner to minimize the disturbance of the natural resources of the area. Due to the great natural resource value of the Gallatin River and its tributary streams, sewage and drainage lines should not be located within a 100-foot distance from any water and/or bank area to prevent contamination of soils and waterways. All sewage disposal systems should be designed so that there is no direct discharge into any water course.

All sewage disposal facilities should be inspected by the Gallatin County Public Health Department for compliance to and with local standards before any actual operational use. Pit privies conforming to state and county standards should be permitted in campground areas only.



## Utility Lines

In general, the main principle involved in the location of transmission lines and facilities is reducing their visibility.

The following guidelines should be followed wherever possible:

1. Consolidate power and telephone easements, preferably underground;
2. Consider placement underground and relocation of existing overhead lines;
3. Place lines along the edges of differing types of land uses (special emphasis should be given to the preservation of natural forest and timber growth);
4. Avoid sites of great scenic value, including prominent ridge lines, riparian areas, and the barren sides of mountains or hilly terrain; and
5. Paint metal poles dark or subdued landscape colors or left natural wood colors; and they should be of a clean, simple geometric standard.

## Street Lighting

Light standards of appropriate scale and luminosity should be used throughout the Canyon area. Flamboyant styling of poles and mercury vapor lights of the bluish-green cold range should be avoided. Subdued pole styling and color with soft warm tones are more appropriate to the Canyon landscape.

Generally, highway lighting is considered to be undesirable and should be avoided except for the following:

1. Illuminate the highway surface in areas of high pedestrian concentrations;
2. Illuminate major intersections with high traffic volumes;
3. Illuminate facades of historical and other public buildings; and
4. Illuminate areas in which pedestrian safety would be increased by illumination.



## SIGNING CONTROL

For many users, enjoyment of the Canyon environment will be enhanced by proper identification of features, trails, special sites, and crossings. A standardized system of signs should be established to act as public facility and informational guides and they should be of a character unique to the region. These signs should have the trail and route signs worked with standard federal symbols, but with distinctive color backgrounds for added recognition and visibility.

The following standards should be adhered to regarding all highway informational and commercial signing:

1. Restrict all signs in size, and eliminate flashing or scintillating signs;
2. Do not permit offsite advertisement signing (provisions should be made to have existing off premise advertising removed);
3. Do not let sign size interfere with or dominate the area surrounding the site of the sign;
4. Ensure that sign illumination, if used, is directed at the sign and not the surrounding area (except for historical sites, lighting should be turned off when the business or service is closed.
5. Construct signs of material, color, and design which are compatible with the surrounding architectural development (garish material and shapes should be avoided);
6. Ensure that the designs have unity, using a minimum of copy and with the proper use of lettering (improper grouping of copy will nullify good design); and
7. Ensure that commercial buildings, signs that fit within the architectural order of the facade do not obscure or damage the building's integrity, and make for easy identification.





A STANDARDIZED SYSTEM OF SIGNS SHOULD BE ESTABLISHED FOR USE THROUGHOUT THE CANYON, AND THEY SHOULD BE OF A CHARACTER UNIQUE TO THE AREA. IT IS IMPORTANT TO ELIMINATE BILLBOARDS AND OTHER UNSIGHTLY SIGNS FROM THE LOCAL ENVIRONMENT. COMMERCIAL SIGNS SHOULD FIT WITHIN THE ARCHITECTURAL THEME OF A DEVELOPMENT--NOT OBSCURING OR DAMAGING THE DEVELOPMENT'S INTEGRITY, BUT MAKING FOR PROPER IDENTIFICATION.









## ACKNOWLEDGEMENTS

We wish to express appreciation to the many State and Federal agencies in Montana who provided data related to Gallatin Canyon and its environs. Most particularly we would like to thank the Gallatin Canyon Planning Study Committee and all the interested private citizens for contributing to the many long discussions concerning planning for their Canyon. Members of the Gallatin Canyon Planning Study Committee are:

Mr. John Haynes, Chairman  
522 South 10th  
Bozeman, Montana 59715

Mr. Richard Buck  
Kountz Trailer Kourt #95  
Bozeman, Montana 59715

Mr. Jeff Dorsey  
Flying D. Ranch  
Gallatin Gateway, Montana  
59730

Mr. James G. Goodrich  
320 Ranch  
Gallatin Gateway, Montana  
59730

Mr. William Hake  
Almart Lodge  
Gallatin Gateway, Montana  
59730

Mr. Sandy Dale  
1107 West Dickerson  
Bozeman, Montana 59715

Mr. Marc T. Patten  
S. of Gallatin Gateway,  
Gallatin Gateway, Montana  
59730

Mr. John V. Potter  
201 West Main, Box 543  
White Sulphur Springs, Montana

Mr. Wendall A. Sylvester  
Gallatin Gateway,  
Montana 59730

Mr. Howard L. Huffman  
1104 N. Spruce Drive  
Bozeman, Montana 59715

Mrs. Barbara Hyman  
Elkhorn Ranch  
Gallatin Gateway, Montana  
59730

Mr. Howard T. Kelsey  
9 Quarter Circle Ranch  
Gallatin Gateway, Montana  
59730

Mr. A. Morris Klare  
1430 S. 5th Avenue  
Bozeman, Montana 59715

Mr. Ken McBride  
Gallatin Gateway,  
Montana 59730

Mr. Robin MacNab  
822 S. 5th  
Bozeman, Montana 59715

Mr. Russ Thorson  
Gallatin Gateway,  
Montana 59730

Mr. Fred Weschenfelder  
Gallatin Gateway,  
Montana 59730

Mr. Norman N. Wortman  
S. of Gallatin Gateway  
Gallatin Gateway, Montana  
59730







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